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ORIGINAL ARTICLES

GUAIACOL IN THE TREATMENT OF TYPHOID FEVER IN CHILDREN

Read in the Section on Diseases of Children at the Forty-sixth Annual Meeting of the American Medical Association at Baltimore, Md, May 7-10, 1895

BY ADOLPH KOENIG, M D
PITTSBURG, PA

The comparative rarity of typhoid fever in children is probably entirely due to the fact of infrequent exposure, and not to any lessened degree of susceptibility as compared with adults I believe that it can now be accepted as proved, that typhoid fever is essentially a water borne disease and that drinking water rather than foul air or direct communication is the medium of infection We thus have an explanation of the rare occurrence of the disease in very young infants and the increasing ratio of its occurrence in children as they gradually receive more solid food and drink more water

The pathologic lesions of typhoid fever in children are necessarily identical with those in adults, except that in children who have passed their very earliest period of life, and in whom the constructive metabolism is at its height, the necrotic process, which in the adult often goes on to perforation of the wall of the intestines is in them resisted more strongly, by reason of their greater reparative power In very young infants this does not hold good, for in them the constructive forces are not yet established to their fullest power and statistics seem to prove that perforation of the intestine, in this class of patients is as frequent as in adults The difficulty of making an absolute diagnosis of typhoid fever in sucklings is however, very great and it is not unlikely that typhoid fever in them is often mistaken for the common diarrheal diseases of infants

Considering the ordinary innocuousness of typhoid fever in children, the question of treatment resolves itself more into a general hygienic and dietetic supervision, than into drug administration When, however, we consider the etiology and pathologic lesions present in the intestinal canal, during the latter stage of this disease, certain forms of medication seem rational and demanded According to the modern bacteriologic investigations, typhoid fever is a self-limited disease which reaches its climax at about the tenth or twelfth day, after the development of the first symptoms, and the activity of the bacillus typhosus apparently ends about the middle of the third week The pathologic lesions, however, remain in the form of ulcers, of greater or less circumference and depth, in the intestinal canal, and the disease then practically resolves itself into a surgical one The question which then arises is how to prevent the infection of the intestinal lesions with septic germs The intestinal tract is the fertile habitat of germs always ready to attack its tissues under conditions of reduced vitality, and to prevent the growth and multiplication of such germs, to render the intestinal canal as uninhabitable as possible for them, is to my mind a rational, and in my experience an efficacious, treatment of typhoid fever To render the intestinal tract as aseptic as possible, it becomes necessary to do more than to administer antiseptics The first treatment a case of typhoid fever should receive is to clear the intestinal canal as much as possible of all foreign matter, and next, the administration of food should be so regulated as to restrict to the greatest possible extent all fermentative processes during the height of the disease, at which time the digestive functions and the absorption of nutritive material are very seriously interfered with, if not entirely arrested

The treatment of typhoid fever in children adopted by me can best be described under the following subdivisions

Initiatory Treatment —When a child is seen for the first time, though the symptoms present point strongly to typhoid fever, it is impossible to make a positive diagnosis, but it is nevertheless my custom to place them upon treatment appropriate for typhoid fever The first object to be aimed at is to clear out the bowels, and this is done by the administration of calomel well triturated with sugar, in doses of 1-20 to 1 10 of a grain, according to the age of the child every two or three hours All solid food is immediately withheld, water however, being given to the extent of the patient's desire

Regular Treatment —If after a few days the temperature assumes the typhoid fever curve, the patient is at once placed on the following treatment

℞ Guaiacolis f ʒ i
Glycerini f ʒ i
Alcoholis f ʒ ii
M Sig One to six drops in whisky and water every two hours, according to the age of the patient

This treatment is continued throughout the course of the disease, the dose of the guaiacol being increased or decreased according to the severity of the symptoms The whisky is given in small quantities In that form I believe it to conserve the tissues of the patient, to stimulate his vital functions and to generally improve his well-being The dose is allowed to range from one-fourth to one teaspoonful, according to age

When no desire for food is manifested, or where a decided aversion for it exists, only meat broth and barley-water is given Milk is allowed either pure or diluted one half with barley-water, if the condition of the digestive functions seems to warrant it As soon as the bowels have become thoroughly emptied the calomel is withheld, to be again resumed should the indications demand it This is the case, as a rule, during the later stage of the disease

Under this plan of treatment, intestinal antisepsis is furthered as is evidenced by the slight degree of tympanitis, absence of sordes on the teeth and especially by the character of the stools, which are much less frequent and are practically destitute of the very disagreeable odor that characterized the passages of patients before the introduction of treatment directed toward intestinal antisepsis.

High temperature is combated by cold sponging alone. No depressing antipyretics of any kind are used.

While I claim that the course of an attack is materially modified in ordinary cases, I do not claim guaiacol as a specific, for under its use during the last five years, (creasote being used part of the time, in place of guaiacol) I have lost two cases. Both of these died during the latter part of the third week, apparently of acute disorganization of the central nerve centers. The peculiar cause of death in connection with these two fatal cases remains to be explained. In each case a younger brother succumbed to the same disease, under different treatment, and under the care of other practitioners within a short period of time. The question naturally arises, was there not some peculiar absence of resisting power in the members of the families in which these cases occurred? The course of the disease in these fatal cases was not specially severe, but as already stated at some time during the latter part of the third week the nerve centers suddenly became involved and death resulted from asthenia.

No difficulty whatever has been experienced in the administration of the remedy, which is a feature of no little value in remedies for children.

ACUTE LACUNAR DIPHTHERIA OF THE TONSILS

Read in the Section on Diseases of Children, at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md., May 7-10, 1895.

BY HENRY KOPLIK, M.D.
NEW YORK.

The writer has been induced to appear before your distinguished body to enlarge upon a theme previously brought to the notice of the profession, because he was convinced that the possible gravity of the apparently simple angina or lacunar tonsillitis was not yet generally accepted.

In a recent discussion upon the antitoxin treatment of diphtheria in the New York Academy of Medicine, one of the prominent speakers referring to bacteriologic diagnoses of diphtheria and especially those diagnoses which reveal the diphtheria not accompanied by membrane or parts of membrane in the throat, said that where the bacteriologic diagnosis of diphtheria, in the absence of clinical evidences, quarantines the house or separates a family from relatives and friends it is a sin against man. A further statement goes on to characterize the treatment of these mild cases in a diphtheria ward as a crime, etc. Another speaker while admitting that he would not give such patients who had no clinical evidences of diphtheria in their throats (membrane or parts of membrane) a clean bill of health, said it was difficult to know what to do with such cases. The terms "clinical diphtheria," "clinical evidences of diphtheria," were freely used and insisted upon as a diagnostic element in all cases where effective isolation is contemplated, at least so one would surmise from a perusal of the printed discussion.

The above is mentioned to show that there is still a wide gap between those who work purely clinical and those who combine the clinical with the findings of scientific research. In other words, we have not advanced a step since the time of the immortal Trousseau, in the diagnosis and prophylaxis of the dread disease, diphtheria, or we have no right to advance. No membrane, no diphtheria! This, to a certain number, is as true to-day as it was in the days of the great pupil of Bretonneau. The writer wishes here to point out the great danger which such a quasi-sentimental definition of diphtheria must needs carry with it. In 1891 the writer of this article, convinced that the gravity of a certain class of apparently simple anginas was not appreciated, undertook to investigate both from a clinical and bacteriologic standpoint all varieties of anginas in which there could scarcely be said to exist at the outset, at least, any clinical evidences *locally* of diphtheria. There was in these cases no form of typical membrane. No such systematic attempt had been undertaken, up to this time, to the writer's knowledge. The profession were told from time to time, that during epidemics of diphtheria, or even in the absence of epidemic influence, what seemed to be a simple lacunar tonsillitis might eventuate as a diphtheria. Trousseau in his lectures upon diphtheria cites forms of lacunar amygdalitis followed by paralyses. These paralyses were similar to those which followed in cases of membranous diphtheria. Trousseau hesitated to call these anginas "diphtheria," even though followed by paralyses. There was no membrane, and he preferred to think rather that paralysis could follow in rare instances a simple tonsillitis. His inability to supply the connecting link between the membranous and the non-membranous cases of diphtheria was the only thing which deterred this clinician from grouping the two classes of cases under one heading. We are certain that had the link been at hand at that time, his views would have been more distinctly radical than they were. He simply said that certain simple anginas might rarely be followed by paralyses.

In 1886 we find this question still a mooted one. Jacobi, of New York, and Fraenkel, of Berlin, both clinical leaders in their respective cities, differed widely in their views upon these cases, Fraenkel insisting that the ground taken by his clinical opponent, that diphtheria may run its course as a lacunar amygdalitis, was too sweeping. At this time also, no proof additional to that submitted by former writers was brought forward to prove the theses of which we are speaking. Every one argued from clinical deduction purely, and clinical deductions seemed to differ when grouped by different observers. After all had been said and done, every one hung to the doctrine of Friedreich, that lacunar amygdalitis was an infectious disease, but would go no further.

Henoch (edition 1893) in his classical hand-book upon diseases of children says in the article upon diphtheria: "I do not recognize the existence of a pharyngeal diphtheria in the form of a simple angina."

Escherich (1890, Henoch's *Festschrift*) while denying the existence of Loffler bacilli in the lacunar tonsillitis of young children, admits their existence in cases of catarrhal anginas of older children, in cases in which at no time has there been membrane or clinical evidences of diphtheria Escherich, in this article is guarded in his conclusions and reserves a decided classification for the opportunity given by a larger material than he had at his disposal

Gerhardt was at this time also very decided in his view that danger lurked in the atypical diphtheria He pointed out their capability of causing diphtheria in others

In my first article (1891 *New York Medical Journal*) upon atypical cases of diphtheria, the first series of cases which were studied bacteriologically were similar to those seen and described clinically by Trousseau, Gerhardt and Escherich, in which we find at the outset no typical membrane Indeed, during the whole course of the disease, no membrane appeared to the naked eye The cases were those of a child 4 years of age, having the symptoms and local manifestations of a simple catarrhal angina, but in whose throat large numbers of virulent Loffler bacilli were found This case was associated in the same family with another severe non membranous angina, in a sister aged 5 years, to whom I presumed the first had communicated the illness, and in this second case we had the same bacteriologic result as in the first case During the whole illness, neither of these cases manifested any membrane Fully a week after the first case had been taken ill, a baby 2½ years old in the same family became afflicted with fatal diphtheria, in which membrane and portions of membrane appeared in the throat, and which also involved the larynx It will be thus seen that here was an almost faultless group of cases observed daily, in which two had the typical "diphtheria *sine membrana*," followed by a third case in the same family of true clinical diphthetia It will naturally be asked, Was diphtheria suspected in the catarrhal cases? Working upon diphtheria at the time, scrapings were obtained from these throats, as shown in my paper, and fortunately several times, and tested upon animals, the results justified our early suspicions The symptoms in these cases in which absolutely no membrane or points of membranous deposit appears in the throat, I must say are equivocal I have examined the throats of children who gave a set of clinical symptoms almost identical to the first class of cases and, as my work shows, I failed with equal precautions to find diphtheria bacilli Thus the croupy coughs, the red throats, fever, enlarged glands and, I may say, even prostration upon which the stress was formerly laid, are not characteristic The only way, it seems to the writer, to positively differentiate these cases is the bacteriologic method

Another class of cases in which we must always be put upon our guard, are those in which a minute speck of membrane appears on the tonsil or uvula, looking like a drop of fibrinous secretion combined with a typical lacunar tonsillitis These cases may be truly diphtheritic Again, a third set of cases, showing pultaceous deposits of a stringy fibrinous character may prove to be non diphtheritic or *vice versa* A fourth set of cases are those in which the tonsil is the seat of a necrotic ulcerative process, with no distinct membranous formation In only one part of the tonsil do we find an excavation, the base of which is covered with specks of exudate Henoch has described such cases, and many still speak of these cases as ulcerative sore throat I have proved many of these cases to be distinctly true diphtheria In some, the children are scarcely ill enough in the eyes of the parents to require treatment It will be seen that there are forms of angina which are diphtheritic in their etiology, in which at no time are there manifestations of membrane, or such exudate as does appear is atypical

Feer has confirmed the writer's work in the first set of cases, and it must now be admitted as firmly established that diphtheria "sine membrana" exists, though it introduces an unfortunate complexity into the problem of clinical diphtheria

The most important class of atypical cases of diphtheria and perhaps the most common are those in which the appearances in the throat resemble in every detail the simple lacunar tonsillitis

In 1894 I published a second paper, in which a series of consecutive cases, all giving the typical clinical picture of lacunar tonsillitis, were examined with special reference as to their diphtheritic or non diphtheritic character This paper adhered closely to this set of cases because in the first paper the material had spread over such a diverse field that it was not possible to judge the actual frequency of any particular set of the cases cited In this series of lacunar tonsillitis, fully one third of thirty-nine cases were shown to be true diphtheria It was possible here, also, to divide the cases into groups as far as the severity and clinical symptoms were concerned

The first group of cases are exceedingly mild, the patients show but little constitutional disturbance and complained but slightly of throat symptoms Examination shows general hyperemia of the fauces, enlarged tonsils with open lacunæ Some of the lacunæ showed an accumulation of yellow secretion at the surface opening The lymph nodes at the angle of the jaw may or may not be enlarged

The second group of lacunar diphtherias are those in which the local and constitutional symptoms are more pronounced The patients show more prostration, the fever is quite high and there are other symptoms as pains in the limbs, furred tongue, etc The tonsils are much enlarged and there exudes from the lacunæ a soft fibrinous exudate There is no form of membrane anywhere on the tonsil and the lymph nodes are much enlarged The plugs of these as also those of the first group contain Loffler bacilli

The third group of cases are those which show distinctly malignant features from the outset They do not remain purely lacunar after the first few days, and in this respect would resemble much, cases described by Heubner of membranous diphtheria, which early in their course resemble lacunar tonsillitis, and subsequently show coagulated exudate on the surface of the tonsil The cases described by the writer belonging to this group, are truly septic in character, and beginning with a picture of lacunar tonsillitis, the infants the first day, even before the membrane is seen, have pallor and prostration which is quite characteristic and may at once put us on our guard These are the cases which subsequently draw the nasal fossæ into the clinical picture They are also the fatal cases They begin as a lacunar tonsillitis and within forty-eight hours membrane and shreds of membrane are voided from behind the immensely swollen tonsils which completely occlude the fauces It is not the intention of the writer to rehearse here the details of the bacteriologic examination of these cases of lacunar diphtheria of the tonsils but there are some points which must be of vast and far reaching importance, and which have been established by the writer and since confirmed by Flexner, Booker (Johns Hopkins Bulletin, March, 1895), and others. The Löffler bacilli of diphtheria, in the cases of lacunar diphtheria are found, not so much on the surface of the tonsil, but in the depths of the lacunæ, in the fibrinous plugs, which occlude the lumina of the lacunæ. The bacilli are of equal virulence, whether obtained from the first group of mild cases or the third group of fatal septic lacunar diphtherias. The bacilli retain their virulence for weeks in the depths of the lacunæ, the patient being in apparent full convalescence, or the tonsils having returned to almost the normal size and appearance. In one case virulent bacilli were obtained from a lacunar plug of the tonsil in the third week of convalescence. A lacunar plug in one case, in which virulent bacilli had been isolated early in the disease showed non-virulent bacilli fully three weeks after the outset of the disease. In other words, virulent bacilli were replaced by the non-virulent variety in this particular lacunar amygdalitis.

Enough has been cited above, of the bacteriology of these cases, to show the importance of this class of cases of diphtheria. Too much weight can not be attached to these facts. We must not be turned aside by any fallacious arguments which continue to harp upon the desirability of a membrane in order to entitle a case to the dignity of the term, *clinical diphtheria*. This term, I believe, was first introduced into medicine by Trousseau. It is a landmark in the history of modern medicine, but it is time to protest against its use as a weapon with which to cast contempt on the class of cases concerned in this paper.

If prophylaxis is the ideal of modern hygiene, then the class of cases treated of in this paper, take a rank first in importance. Innocent in appearance, they are the means of disseminating a dread affection. Serious and unremitting isolation is the only method by which we can show our appreciation of their serious nature. Their importance crops out in the operating room constantly. At the last meeting of the American Pediatric Society, the writer of this paper insisted that those cases of tonsillotomy upon enlarged tonsils which were followed by membranous diphtheria, or even croup, were undoubtedly of the nature of the cases described in this paper. It has been shown by the writer that in these large tonsils, virulent diphtheria bacilli exist long into convalescence. As long as they are left to the natural fluids in the lacunæ no harm results to the patient, and we have even reason to believe, as pointed out in my second paper, that they gradually lose their original virulence. Cut this out, however, and you expose to the propagation of the bacilli in the lacunæ the most favored of growing media, a freshly cut surface bathed in lymph, and a membrane results, in some cases spreading to the fauces and larynx. One case of this kind is enough to convince the most skeptical, and yet there are many such, doubtless, who are waiting for the case to occur to them.

Diagnosis.—How can we approach the diagnosis of these cases? The old methods, such as proposed by Henoch, only apply to cases which finally develop membrane or portions of membrane. If we wish, however, to pick out the pure lacunar diphtherias in which membrane never forms, we will find that our safest method is the bacteriologic test. To test the urine to wait for specks of membrane to appear, only delays matters and does not aid us, for we have not only albuminuria in the streptococcus tonsillitis, but also glandular swellings and prostration with low and high curves of temperature. The opponents of bacteriologic diagnosis say that the Löffler bacillus has been found on the normal mucous membrane. Would you call such a case diphtheria and isolate it? The answer to this fallacious argument is plain. The well authenticated cases in which investigators of acknowledged rank (Löffler, Roux) have found virulent bacilli on the normal mucous membrane, are exceedingly rare and exceptional. They are found in throats perhaps exposed to a diphtheria atmosphere. Since the inauguration of the simple crude methods of diagnosing a case of diphtheria by growing a culture and staining a few covers has come more and more into vogue, the bacilli in the normal throats have multiplied in frequency. We would ask that methods showing such evident flaws be not taken too seriously. They are necessary in rapid hygienic work, but must not be brought forward as an argument.

Given an angina in which Löffler bacilli have been demonstrated to exist in large numbers, such a throat is diphtheritic and must be grouped with diphtheria, membranous or otherwise. It should be unmercifully isolated whether it isolates the patient from friends and family or sends the patient into a contagious ward where severe cases of diphtheria are treated. It has been maintained that the placing of such cases among severer cases is an injustice to the patient. Those who have studied diphtheria since the discovery of Löffler must subscribe to the views brought forward by Escherich. These mild cases of diphtheria must be explained on the ground of immunity. They do not develop membrane and can not develop severe diphtheria, because in these particular individuals there is a natural or acquired immunity which protects them against the severer manifestations of the disease. If you place them, therefore, in a ward in which there are very severe cases of diphtheria, no more injustice is done to the mild case of diphtheria than would be done to a correspondingly mild case of measles placed in a ward with very severe and complicated measles.

On the other hand, these mild cases of diphtheria or lacunar diphtheria or diphtheria "sine membrana" are capable of communicating fatal or severe diphtheria to others. If we grant the above, which is the result of years of work at the bedside and in the laboratory, the principal arguments of the alarmists fall to the ground.

CLINICAL EXPERIENCE WITH ANTITOXIN IN PRIVATE AND HOSPITAL PRACTICE IN THE TREATMENT OF DIPHTHERIA—(ALL FORMS).

Read in the Section on Diseases of Children at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md., May 7-10, 1895.

BY LOUIS FISCHER, M.D.

Instructor in Diseases of Children at the New York Post-graduate Medical School and Hospital, Physician in Charge of the Messiah Home, Physician to the Children's Department of the German Polyklinik.

NEW YORK.

My first successful case with antitoxin was published in the *New York Medical Record*, Oct. 6, 1894, in which a child 11 years old was attended by Dr. Gerlach. In this case I injected 5 ccm. of Aronson's antitoxin between the shoulder blades. The child was discharged, cured, on the fourth day. This patient was presented before the New York Post Graduate Clinical Society at its first meeting in the Hospital Building in October

Since then I have published a series of papers, embodying various clinical experiences, notably, however, papers that appeared on Nov 17, 1894, in the *New York Medical Record* A series of thirty six cases which were attended by me, was published in the January number of the *American Journal of Medical Science*, wherein I reported a very successful list of cases

My percentage of deaths was but 5 8 per cent The antitoxin used was brought over by me from Berlin last summer Some of my patients were attended in the Municipal Hospital, Philadelphia, through the extreme courtesy of Dr Welch, the supervising physician in charge, and also through Dr Edward Davis, the editor of the *American Journal of Medical Sciences* It is only necessary for me, however, to refer to the paper read by me before the German Medical Society of New York on March 4, 1895, in which I reported a series of 223 cases These were largely made up of cases attended in hospitals and private practice, but most of them were those seen in consultation The paper has since then appeared *in extenso* in the *New York Medical Record*, April 6 1895 The mortality among the 223 cases was 15 11 per cent This was by me in January, and can be accounted for in various more than twice as much as the first mortality, reported ways 1, a great many cases were seen in consultation and were cases which were moribund, in other words, hopeless cases, and cases in which antitoxin was used as a last resort, 2, a great many deaths were also in children that had been suffering from mixed infections, cases of scarlet fever and diphtheria, cases of chickenpox and diphtheria, cases of measles and diphtheria It is here that we can not look for any benefit from the antitoxin, because in some cases, especially in those which were fatal, I found that I was rather called upon to treat cases of septicemia and not cases of toxism, caused only by one infection, the Klebs-Loffler bacillus but rather the combined septic influences of the Klebs-Loffler bacillus and the streptococcus in scarlet fever and other microorganisms with which we are not so familiar

A very interesting case, and one which I published in detail, was a consultation case with Dr Roberts, of New York, wherein I refused to inject antitoxin, owing to a scarlet fever complication In this case we had both diphtheria and scarlet fever, and the child presented a typical appearance of sepsis The child died about one or two hours after I saw it, and if I had injected this case, we might have believed the antitoxin was again inert I had, however, injected a prophylactic dose of antitoxin in another child in the same family, in the presence of Dr Roberts This child had been exposed to diphtheria, remained immune and was well when I last heard from it through Dr Roberts, the attending physician

The constant differences in strength, presence of noxious albuminoidal bodies, and other drawbacks, have given rise to complaints of inefficacy, occurrence of secondary effects and sequelæ, and even deaths The use of such uncertain preparations tends to create confusion, and has already given rise to personal recriminations in the medical papers The investigations of Wernicke, Ehrlich, Behring and Aronson on the question of acquired immunity from diphtheria, which were published in the scientific journals, have enabled some manufacturers to produce a serum which is more apt to prejudice the value of the original discovery than to supply the demand for an efficient remedy

It may be pointed out here, that antitoxin is not made by merely inoculating an animal, drawing off the blood after a certain interval, coagulating and separating the serum Antitoxin and serum are not synonymous terms Aronson's antitoxin, with which the best results were obtained, and on which the first clinical reports have been based, is a highly concentrated antitoxin, from which the inert and noxious constituents of the serum are eliminated

The antitoxin made in Schering's bacteriologic department is, since April 1, controlled by the German government The official demands require that the serum is clear, containing at the most only a slight sediment, that the preservative is used in the proper proportions and that the antitoxin possesses the specified degree of immunizing power This control is carried out in the Berlin Institute for Infectious Diseases, the weighing out, the drawing of samples, and filling in the factory being conducted in the presence of a sworn State officer Further, the State requirements include the control of the health of the animals, the keeping of a control book, in which entries are made of all the horses, the period of their treatment, the amount and frequency of the blood-drawing, etc

Physicians will readily see the importance of this measure, giving a satisfactory guaranty that the preparation has been made, tested and put up under the direct supervision of the German government and independent scientific experts

Another important point in connection with the preparation is its keeping qualities Dr Aronson's antitoxin, which is preserved with four tenths of 1 per cent of trikresol, keeps for an unlimited period of time, and according to the latest investigations, retains its full efficacy for at least one year

In order to illustrate a few cases which have not been hitherto published and which are some of my most recent publication cases, permit me to offer the following

Katie K, child 4 years old, was brought to the office of Dr R H Theyson, on April 18, 1895, to be treated for vomiting Examination found the temperature 100, pulse 100 very slightly congested April 14, temperature remained 100 pulse 110, vomiting had ceased, congestion in the throat slightly increased The Doctor put the child on the ordinary form of antipyretic treatment and also prescribed an astringent for the throat April 15 the temperature was 103 pulse 120 and slight patches of dirty white membrane were visible on the left tonsil, a small patch on the uvula and the breath was fetid The child [illegible] arently in good health and lively On April 16, at 9 [illegible] the temperature was 103, pulse 140, the child very sl[illegible] an extremely rapid increase of the membrane, which was thick and tough, covering both tonsils, pharynx, uvula and there was an acrid discharge from both nares The breath was extremely vile This case was also seen on the same day by Dr Brackes I was called in consultation at 7 30 on the evening of April 16, with Dr Theyson, and found the throat completely covered with large masses of pseudo membranes Temperature 103, pulse 104 In order to corroborate the diagnosis, I made a culture on blood serum through the courtesy of the attending physician, which proved Klebs-Löffler bacilli, and I was also asked to inject antitoxin I injected 5 ccm of Aronson's antitoxin using the ordinary antiseptic precautions for the skin and instruments, between the interscapular region The morning after I injected the antitoxin the temperature was 103 the pulse 140 The child feels brighter and there seems to be no increase of the membrane Slight amount of albumin in the urine April 18, pulse 140 temperature 102 vomited some small pieces of membrane at 9 30 in the even ing Owing to a feeble pulse, free stimulants were ordered April 19, pulse 120, temperature 120 The child has vomited considerable pieces of membrane Two pieces were the size of 10 cent pieces The appearance of the membrane in the throat is somewhat thinner April 20, temperature 100, pulse 110, child very bright April 21, membrane has disappeared from both tonsils, seems to be very thin on the posterior nares, temperature 100, pulse 110 April 22, temperature 99, pulse 110 April 23, temperature 98 5, pulse 90 Membrane is gradually disappearing April 24, temperature 101, pulse 100, membrane almost gone, albumin still in the urine April 25, temperature 98, pulse 100, discharge from the nares stopped April 26, 27 and 28, temperature 99 and pulse 100 On April 26, membrane disappeared April 28, patient discharged cured

Temperature April 13, 100° F
" 15, 103° F
" 17, 103° F Aronson's antitoxin injected
" 18, 102° F
" 19, 100° F
" 22, 98 6° F
" 24, 101° F
" 25, 98 6° F
Pulse April 13, 100
" 15, 140
" 16, 140 Antitoxin injected
" 18, 140 morning
" 18, 125, evening
" 19, 120
" 20, 100
" 23, 90
" 24, 100
" 25 26 and 27, 100

On April 16, the culture made by me proved Klebs-Loffler bacilli This is one of my typical cases, as I have seen them and as I have been used to treating them and, although it was agreed that this was a very bad case and that under ordinary circumstances we would give a very fatal prognosis, this child is well and received no other medication, excepting naso-pharyngeal irrigation and local applications of some antiseptic solution

A second case equally interesting is the following I was called on April 13, by Dr A W Newfield, to see a case of laryngeal stenosis and membranous diphtheria, involving the complete naso-pharynx, both tonsils and uvula The child was in such bad condition, that although I was called to inject antitoxin, I told the attending physician that it would very likely require intubation before evening This was about 3 P M That evening, Dr Emil Mayer was called in consultation to introduce a tube The following day, by appointment, I met Dr Newfield, Dr Emil Mayer and Dr N S Roberts On talking this case over, we decided that there till was severe laryngeal stenosis, and it was agreed that I hould be permitted to examine the case I was surprised o find no tube It was plain to me that the child had probably coughed up the tube and swallowed it I was permitted to intubate the child, which was rapidly done in the presence of the three physicians Breathing at once was easier and the stenosis relieved I did not hear from the case until Tuesday, when Dr A W Newfield, the attending physician, called on me to extubate, as the child was entirely well I begged the doctor to permit the tube to remain *in situ* for at least two days longer, on the following Thursday I removed the tube The child remained well

In this case the prognosis was so bad that it was considered a hopeless case and the attending physician believed, as well as I did, that the case was a bad one, but having seen worse cases get well, I decided to give only a cautious prognosis In this case the urine was examined by Dr Newfield and found normal, there evidently was no irritation caused by the antitoxin I injected only 5 ccm of Aronson's antitoxin between the shoulder blades and ordered naso-pharyngeal antisepsis, consisting of washing the nares and throat with a normal saline solution (warm)

The third case and still more interesting than the above two, was one that was referred to me by the kindness of Prof H J Boldt of this city on April 7 A child, about 2 years old, in extreme dyspnea, was seen by Professor Boldt and he wrote me that it was of the utmost importance to relieve the laryngeal stenosis by intubation I intubated and the relief was immediate I allowed the tube to remain three days and extubated, when the membranes reappeared and it was necessary to re intubate This has been done in all four times The depth of the disease and the malignancy of this case can only be imagined, when we consider that we have an extension of the disease from the pharynx to the larynx, and from the larynx to the trachea and as far down as we can not see but only conjecture Long shreds of membrane are to day coughed up, exactly as they were two weeks ago The temperature has been varying between 103 and 101

Owing to the great risk of feeding and causing pneumonia, in all my cases I have insisted from the first in feeding per rectum, by using an emulsion, consisting of the yolk of an egg and starch water, and beef tea mixed with starch water, and also injected stimulants in the same manner when indicated I have found that children can get along very well for a week without feeding through the mouth, nor do I give anything through the mouth to quench thirst, but rely solely upon these enemata for both thirst and nourishment

In all my cases it has been a surprising fact, the amount of good that could be done by combining intubation and antitoxin, but we must know that we are using antitoxin and a reliable preparation of the same only The condition of the glands, the condition of the pseudo membrane, the temperature curve, the pulse, the heart's action, the urine, the skin and the eruptions following injection of antitoxin are points on which I have already elaborated in the series of papers, which I have quoted in the beginning of this short paper and to which I would beg to refer I can not therefore take up your valuable time and go into detail on the above subjects without encroaching on the time usually allotted to a paper of this kind Suffice it to say, that the mortality of my cases of diphtheria, as compared with the mortality of my cases of diphtheria before the antitoxin era is at least 500 per cent better

When such eminent men as Professors Heubner, Baginsky, von Wiederhofer of Vienna, von Ranck of Munich, Rauchfuss of St Petersburg, von Mehring of Halle, Vierordt, von Norden, Seitz of Munich and others, will suddenly change all hitherto known therapeutics, and as at the Thirteenth Congress of Internal Medicine, which was held in Munich in April, 1895, suddenly drop all former medication and get enthusiastic over antitoxin and what it will do in diphtheria, then there must be some real reason for it When I was at Berlin, Professor Baginsky told me that the mortality of diphtheria had been during the last four or five years about 40 to 42 per cent, and suddenly during the introduction of antitoxin, the mortality went down to about 12 per cent Through some accident no antitoxin could be had for a short time and again the mortality rose to almost 50 per cent, and then when antitoxin was again to be had, went down to 10 per cent These facts, as they are the true statistics from one of the renowned hospitals in Berlin, the Emperor and Empress Frederick Children's Hospital, will speak volumes The same can be said about the sudden enthusiasm of Professor Heubner

There are a great many contra-indications to the use of antitoxin and these have been pointed out by me in an elaborate paper published in the *Medical Record* on April 6, 1895 Especially must we be careful where there has been a severe form of kidney trouble prior to the attack of diphtheria and especially so where there has been a great amount of irritation in the urine But do we not always use great caution when putting a patient under ether and inquire whether he has had kidney trouble formerly? We all recognize there are certain drugs that would irritate the kidneys, that would interfere with the usual heart's action, some like digitalis, that have a very irritable effect upon the stomach, again other drugs in which we must use great caution, owing to their injurious effect within the body If this be so, why should we not use great caution and judgment in prescribing antitoxin, and inquire if there are not some contra indications for its use, but with my experience to day, covering over 260 odd cases, we must believe that some of the brilliant results attained by me have been due and only due to antitoxin I will only refer to the case I have reported, in consultation with Dr Newfield and which was intubated in the presence of three colleagues The other case of Dr Theyson is equally illustrative I would not be willing to attend a case of diphtheria to day, with what I have learned and seen in hospital and private practice, without antitoxin, any more than I would be willing to attend and promise a good result in any form of intermittent fever without quinin, or promise any decent result with other drugs than mercury in syphilis

Having directed your attention to the good results obtained by the use of antitoxin, permit me, conclusion, to say, that I have had experience with but one patient in New York with domestic serum, this was in consultation with Dr Landes A third physician injected the antitoxin The patient died the following morning I was so much disheartened by the case that I have never since—nor had I previously used or prescribed—domestic antitoxin I believe that we are justified in prescribing a specific kind of antitoxin, just as much as we are to-day in the habit of using standard preparations to specify good drugs in other diseases

187 2nd Avenue

CLINICAL OBSERVATIONS IN THE TREATMENT OF DIPHTHERIA WITH ANTITOXIN

Read in the Section on Diseases of Children, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md May 7 10 1895

BY A CAMPBELL WHITE, M D
NEW YORK.

The medical profession in America has now had an experience of about one year with the antitoxin treatment of diphtheria It is true that during the first six months the source of our supply of antitoxin was from abroad, and that this supply was necessarily limited, but during the past five or six months the supply has been about equal to the demand, and not many cases of diphtheria, particularly in the larger cities, need have suffered because of an inability to obtain serum of proper quality and strength

The desire, or ambition, on the part of the medical profession to give this remedy a trial has certainly not been lacking, for I believe I am safe in saying that nothing in the domain of medicine has so attracted the universal attention of the profession and the public the world over, as this treatment of diphtheria with antitoxin

Our National government, some of the State governments and the leading bacteriologists and clinicians of our country have manifested an active interest in testing the efficacy of this treatment In doing this, Americans have only been following the example of Germany, France and England, where the treatment has been afforded a considerably longer and much more extensive trial

It seems, therefore, as if the theory of the antitoxin treatment of diphtheria should by this time either be discarded or denounced as unsound and worthless by those who have been carefully and scientifically testing its merits all over the world, or the theory should be accepted as giving to us a remedy with which to combat one of the most fatal diseases coming under the care of the physician, and pointing the way to the successful treatment of many other dreaded diseases of bacterial origin

Have we, then, after this universal and extensive use of antitoxin any evidence or testimony to show that it does not overcome the toxemia of diphtheria, or that it is contra-indicated in the treatment of diphtheria? If so, what is the evidence, and what is the source of this evidence?

Have we any evidence or testimony that antitoxin does overcome the toxemia of diphtheria? If so, what is this evidence, and what is its source?

1 *What has the Work in the Laboratory Shown?*—The process of the manufacturing and testing of antitoxin, I consider one of the soundest proofs of its efficacy If we could find anywhere the testimony of a bacteriologist of experience that antitoxin does not save the life of a guinea pig or other animal, when this animal is injected with several times the fatal dose of the diphtheria toxin, we might then hesitate in our belief in its utility But we can not find such testimony, and have we any authority for believing that the same phenomena do not occur in man as in the guinea pig, dog, horse and other animals, when the cause of the phenomena is the same in both cases? The results in the laboratory all tend to demonstrate the feasibility of the antitoxin theory

2 *What has Clinical Study Demonstrated?*—It must have impressed every one forcibly who has followed the literature upon this subject, that nearly all the unfavorable reports have come from those whose experience has been extremely limited, that is, we see an occasional report of a case that has received antitoxin, and later died, or, sometimes a very complete report is made of an individual case, showing that after an injection of antitoxin there is a sudden development of alarming symptoms, quickly followed by death, or the patient may have lived some time after the injection, suffering all the time from symptoms which have never been seen before in the course of an attack of diphtheria In either case we are to believe that antitoxin is the factor which has caused the fatal termination Then, again, we read more reports to the effect that antitoxin has no influence whatever on the course of diphtheria, either good or bad

Before accepting these reports of extremely limited numbers of cases as an evidence against the use of a remedy which, in the experience of so many, has given such great promise of good, we should carefully eliminate the possibility of there having been other factors than antitoxin in determining the unfortunate results of these cases The entire solution at a low temperature might be injected directly into a blood vessel—the same might be true of a considerable quantity of air, for it is extremely difficult with most of the syringes used, not to have some air in the cylinder at the time of injection Either of these accidents might cause a sudden and fatal termination

Then, again, where did the antitoxin come from? Not only can a serum be put on the market containing little or no antitoxin—and it would have been easy to have sold such a serum some time ago and not very difficult now—but it is only with careful prolonged experience and costly labor that an antitoxin solution can be prepared which can be used and relied upon with perfect safety

The clinical testimony in favor of the use of antitoxin is abundant The reports, with hardly an exception, from every hospital the world over, where antitoxin has been given extensive trials, have shown most wonderful results, and these reports have included the observation of some of the most conservative and distinguished clinicians of the world In fact, nearly every report made upon a sufficient number of cases upon which to base a satisfactory conclusion is but another evidence in favor of the use of antitoxin

It has been my good fortune to see in hospital and private practice something over two hundred cases of diphtheria, varying in severity from its mildest form to its most malignant manifestation, treated with antitoxin of varying strength and obtained from different sources

The results of the first series of cases treated in this country were published by me in November, 1894[1] At that time I stated that I believed we had received in antitoxin a specific for diphtheria, in that it would prevent death from the absorption of the toxins of diphtheria, when given at the proper time and in sufficient quantity I have no reason to day to modify this statement Further experience has only confirmed the conclusions derived from the treatment of the first twenty cases

It is not my purpose to present to you a number of tables and statistics showing the value of this remedy, I hope this is not necessary I shall endeavor, as briefly as possible, to relate to you, without the use of figures, some of the clinical manifestations of diphtheria, with its complications when treated with antitoxin, and a few practical points in the administration of antitoxin

I shall first consider the effects of antitoxin upon the local conditions caused by diphtheria where the larynx is not involved

FALSE MEMBRANE

It is the common experience of all of us to see cases of "bacteriologic diphtheria" showing only a few patches of false membrane, cases which we would have undoubtedly diagnosed as tonsillitis some years ago, before we could rely upon the microscope for assistance In these cases we could hardly expect to see any difference in the results obtained with antitoxin and those obtained with our former methods of treatment Still, I think it has also been the experience of many of us to have seen these at first mild or tonsillar cases gradually or suddenly develop into the most malignant form of diphtheria, sometimes terminating fatally This, I recognize, is not the rule, but it is certainly not so very infrequent I have never seen such a case of diphtheria when treated with antitoxin take any other course than rapid recovery, and it is in this class of cases that it is so difficult to fully appreciate the value of the treatment Where the membrane is fully developed, covering to a more or less extent the tonsils, uvula, pharynx, posterior nares and nares, we have certainly occasion for alarm, and it is in such cases we want and seek more particularly for a specific

It has not been my fortune to see with the use of antitoxin any material shortening of the duration of membrane, where it has become firmly attached and seems to be a part of the mucous membrane underlying I have seen some rapid discarding of membrane before the use of antitoxin, and I have seen a few cases since, but in the latter case we could hardly claim that antitoxin was the curative agent In fact, I do not believe that antitoxin shortens the duration of the false membrane at the most more than two days, and I have never seen it "melt away in a few hours' time" We do notice, however, some change in its appearance some twelve to twenty-four hours after an injection of the serum, the edges of the false membrane become sharply defined and it may appear to have become thicker than it was before the injection This is a good omen and augurs well for the patient's recovery

The more important effect antitoxin has upon the pseudo membrane of diphtheria is its power to abort or check its further extension, and in this respect we certainly obtain the desired results This power has been well demonstrated in many cases of diphtheria when we have been obliged to forcibly remove from the nose, plugs of membrane, which completely obstructed these passages and formed a source of septemic infection Whenever this has been done before the use of antitoxin there has almost immediately been a re formation of membrane, necessitating a repetition of the operation, and I do not remember having seen but one child (the procedure has proved successful almost invariably in adults) recover after this forcible removal of false membrane from the nasal passages, while, on the other hand, recoveries have been frequent in cases treated in the same manner and under the influence of antitoxin, and in most cases there has been no evidence of the slightest tendency to a recurrence of the membrane

The influence of antitoxin on these cases I consider one of the best evidences of its efficiency

EDEMA, OR SWELLING OF MUCOUS MEMBRANE

The prognosis in all those cases which are ushered in by edema of the uvula and marked swelling of the pillars of the fauces, or where the false membrane first appears and is soon followed by this same condition of edema, is always unfavorable, and it is this form of diphtheria which gives the most pain and general discomfort to the patient Upon this condition, antitoxin exerts a most decided and satisfactory influence The patient in about ten hours finds deglutition is not accompanied with so much pain and difficulty as before It is also this subsidence of the swelling which causes the false membrane to appear thicker and more defined in outline

GLANDULAR SWELLING, OR DIFFUSE INFILTRATION OF THE NECK

This glandular enlargement of the neck which appears so rapidly in certain forms of diphtheria, especially those in which there is involvement of the posterior nares, could hardly be expected, having become fully developed, to disappear at once under any treatment, while it is the rule under almost any form of treatment for these enlargements to gradually develop until the membrane disappears or absorption of toxins ceases They rarely suppurate in diphtheria, in any case, unless it be some time during convalescence Suppuration seems to have occurred just as frequently as it did before the use of antitoxin, but the subsidence of the acute glandular swelling seems to have been accomplished more rapidly with the use of antitoxin than with other remedies

OTITIS MEDIA

The frequency of this complication seems to have been somewhat lessened, but this fact can hardly be directly attributed to the virtue of antitoxin It has been probably due to the fact that the irrigation or local treatment of the posterior nares and pharynx have been much diminished in frequency of application

SYSTEMIC SYMPTOMS

I refer by the systemic symptoms to the influence of antitoxin upon the temperature and pulse, post-diphtheritic paralysis, sudden cardiac paralysis, nephritis and the general condition of the patient

I have found no reason for changing the statement made in my first paper concerning the influence of antitoxin upon the temperature and pulse, which is as follows

"The temperature of diphtheria is so variable, being sometimes low in the most severe cases and high in others, it is impossible to tell how much it is influenced by any treatment In some of the cases the rise in temperature after the injection was marked, in others there was no decided change, while in still others there was considerable fall This fall of temperature we notice in many cases soon after the entrance to the hospital, the temperature on admission probably being the so called 'ambulance fever' Streptococci, inflammation, and other complications also give a high temperature, therefore antitoxin could have no influence on these temperatures

"The effect upon the pulse is of much more importance In nearly all cases nine hours after injection the pulse was much improved in strength, volume and frequency"

POST DIPHTHERITIC PARALYSES

As to the effect upon the post-diphtheritic paralyses, no influence seems to be exerted upon a paralysis already established Antitoxin, it would seem ought certainly to prevent, when given early in the disease, the later development of a paralysis This it does not always do, for we have seen quite a number of patients develop in the usual way post diphtheritic paralysis after having been treated with full doses of antitoxin early in the disease The same remarks apply to the sudden heart paralysis It is difficult to determine just how much the occurrence of these paralyses is influenced by the injection, but it is my impression that they are diminished in frequency and in severity, nearly all the cases showing paralysis only of the muscles of the soft palate

ALBUMINURIA, OR NEPHRITIS

Several observers have asserted that the appearance of albumin in the urine occurs with much more frequency when antitoxin is employed as a means of treatment We have used the same methods of urinary examination for albumin since the use of antitoxin as we did before, and have failed to find that the same observation applies to our cases If there has been any change at all it has been in favor of antitoxin It is possible that those who have found the appearance of albumin more frequently than formerly, have examined more carefully the urine of antitoxin patients and have even used more delicate tests If this be the case, the results are unsatisfactory unless compared with equally careful urinary analyses of patients who have not received the treatment

It will be seen thus far I have described no sudden change in the symptoms of diphtheria, either local or systemic, following the use of antitoxin I have said the false membrane does not disappear rapidly, the glandular swelling of the neck does not subside immediately, neither does a high temperature always rapidly fall Nevertheless, there is a marked change seen some twelve hours after the proper dose of antitoxin has been given *This change is chiefly in the general condition of the patient, and the improvement of some patients in this one respect is remarkable in its extent and suddenness A bad prognosis given in an individual case can, by the use of antitoxin, be changed to one of almost sure recovery within twelve hours' time*

It is this one fact which has led me to consider the remarks made recently against the use of antitoxin[3] (in spite of the fact that they come from so distinguished and careful a clinician as Dr Joseph E Winters), to be an argument in favor of its utility

Dr Winters said "I have failed to see the slightest evidence that it neutralized the toxemia in a single case I have never found that it exerted the slightest influence for good in a single clinical manifestation of the disease"

Nearly all the cases seen by Dr Winters were seen by others as well as myself Our observations differ in great measure from those of Dr Winters, who bases his conclusions upon the fact that nearly all the cases were mild and would have recovered without any treatment

Oh the other hand, we consider that more severe cases of diphtheria have entered the hospital during the past three or four months than ever before This difference of opinion is explained by the fact that Dr Winters saw the patients (this applies to a great majority of the cases), some twelve to twenty-four hours after the injection of antitoxin had been made, and some twelve to twenty-four hours after an unfavorable prognosis had been given by those who admitted the patient

For this reason I believe this difference in opinion only emphasizes the point just made, that *with the proper dose of antitoxin a bad prognosis in an individual case can be changed to one of almost sure recovery within twelve hours' time*

LARYNGEAL CASES

I can only mention these cases briefly The treatment of laryngeal diphtheria with antitoxin can not be intelligently discussed in so short a time, an entire paper could be devoted to this topic with satisfaction

It is in the laryngeal cases that we see the most marked reduction in the mortality, and this applies to the operative cases as well, either when tracheotomized or intubated

If we depend upon antitoxin only, in our treatment of this class of cases, we must resort to operative interference earlier than when we use other methods of relief for the stenosis, such as calomel sublimation, poultices applied to the neck and other recognized forms of treatment The reason for this is evident, the antitoxin not exerting much influence until at least nine hours after injection, while the stenosis may demand immediate relief

BAD RESULTS

Numerous skin lesions are seen quite frequently, generally not causing much disturbance to the patient They assume the different forms of urticaria, erythema, measles and scarlatina, and may appear at any time during the course of treatment

Some of the cases which were said to have an antitoxin rash resembling scarlatina developed symptoms of some septic infection, followed by pain and swelling of the joints There is hardly any doubt in my mind that these were true cases of scarlatina, the joint symptoms following the eruption, and in some cases the nephritis, are only additional points in confirmation of this theory I have never seen any other of the evil effects ascribed to the use of antitoxin by some observers

In conclusion, I shall endeavor briefly to mention a few of the more important points to be observed in the administration of antitoxin serum

TIME OF ADMINISTRATION

Great stress has always been laid upon the necessity of the early administration of this remedy Too much can not be said upon this subject, for, of course, no harm can possibly be done and benefit should always result from its early administration Nevertheless, I have reason to believe from experience in consultation, the magnifying of this point by nearly all writers has been the means of depriving not a few patients of the benefit of this treatment We must constantly hold in mind the fact that diphtheria is one of the most variable diseases with which we come in contact, and that the symptoms on the second or third day of the disease in one case of diphtheria may be even more fully developed than in another patient who has been afflicted for double that time, granting that both are severe forms of the disease The absorption of the toxins in one case has been extremely rapid, while in the other the absorption is slower, just as certain, and often just as fatal This difference depends upon the virulence of the bacilli, the susceptibility of the patient to the toxin, and the power to overcome the toxemia when once established

We see therefore, that we can expect better results in some cases from early treatment with antitoxin than in others that in many cases the treatment begun late in the disease may save life, and that the classification of cases treated with antitoxin according to the days upon which the treatment was begun is not by any means a sure indication of what the antitoxin has accomplished

The history of a patient seen some months ago in consultation illustrates well a point in this connection I saw the child after he had been ill seven days with tonsillar diphtheria On the evening before the child was seen by me the symptoms, local and systemic, which up to this time had been very mild, suddenly changed for the worse The false membrane began to spread and by morning involved the tonsils, uvula, pharynx, posterior nares and larynx, as evidenced by extreme stenosis The glands in the neck were also considerably enlarged I advised postponement of operative interference as long as possible and prescribed other measures for the relief of the stenosis The physician in attendance thought the antitoxin could hardly be of use as the patient had already been ill seven days I believed the antitoxin would be as efficacious in this case as if it were the second day of the disease instead of the eighth, and the antitoxin was injected The result in the case proved the latter to be true, and we felt safe the following day in assuring the mother of the recovery of her child The recovery of the child was as rapid and complete as in any case I have ever seen

We must take into consideration in each individual case the rapidity of the onset of symptoms, the general condition and age of the patient, in determining the dose of antitoxin to be administered and the prognosis to be given, and not depend too much upon the duration of the disease as a guide

SITE OF INJECTION AND PRECAUTIONS TO BE TAKEN

We must select that place which will give the least disturbance to the patient during and after the injection and which is most convenient for the operator when dealing with a refractory child If we select the extremities, we are more liable to put the contents of the syringe into some blood vessel, as we have reason to believe has been done before with fatal results The inter-scapular region or the chest are better places, but I believe, taking all points into consideration, we shall find either of the buttocks the most convenient and satisfactory situation, both to the operator and the patient They should be thoroughly cleaned with green soap and alcohol, the injection should be made deep and the buttocks should not be rubbed or massaged after injection

THE SYRINGE

We can not exercise too great care in the selection of a syringe to be used for this purpose It should be large enough to contain a single dose of the serum, it should be as simple as possible, it should contain no valves that can not be easily cleaned, and it should be such a syringe that the operator can inject a large quantity of fluid into a struggling child without the danger of the needle being pulled out before the injection is finished or even broken off and left in the child, and further, such a syringe as will preclude the possibility of air being injected

The Roux syringe up to a short time ago was the only syringe which combined to any considerable extent these requisite qualities It is elaborate, useful, expensive and can not be obtained without difficulty, as only a limited number have been imported

A syringe for antitoxin use, recently invented by Dr Cyrus Edson, is remarkable for its simplicity and utility After using this syringe on several cases I have found it quite necessary to make several changes in it, which I believe now make this syringe the most satisfactory in every respect of all the syringes used for this purpose The only defects in the Edson syringe were the straight and smooth cylinder, which allows the finger to slip during use, the direct connection of the needle to the cylinder, which does not allow of any play to the syringe during the injection, the necessity of a separate receptacle for the needle, rendering the sterilization of another tube necessary

The syringe, as modified, has the following features, which will recommend it to your use

1 The cylinder is entirely of glass and the piston of metal

2 The needles are contained in the shank of the piston

3 There is a rubber tube, which can be changed at each injection if desired, connecting the needle with the cylinder, or the syringe can be used without this tube

4 There is not a screw joint in the instrument

5 The washers are simply thin pieces of rubber,

which can be cut from an ordinary rubber bandage, and kept constantly in an antiseptic solution never to be used but once

6 The entire syringe consists of three distinct parts, viz, the glass cylinder, the piston (containing the needles), and the rubber tube All these are contained in metal cases together with a pair of thumb forceps and a bottle containing the washers, and the entire outfit, case and all, can be put in a sterilizer or boiling water and quickly and satisfactorily rendered sterile immediately before using

The accompanying figure will illustrate quite well the simplicity of this syringe

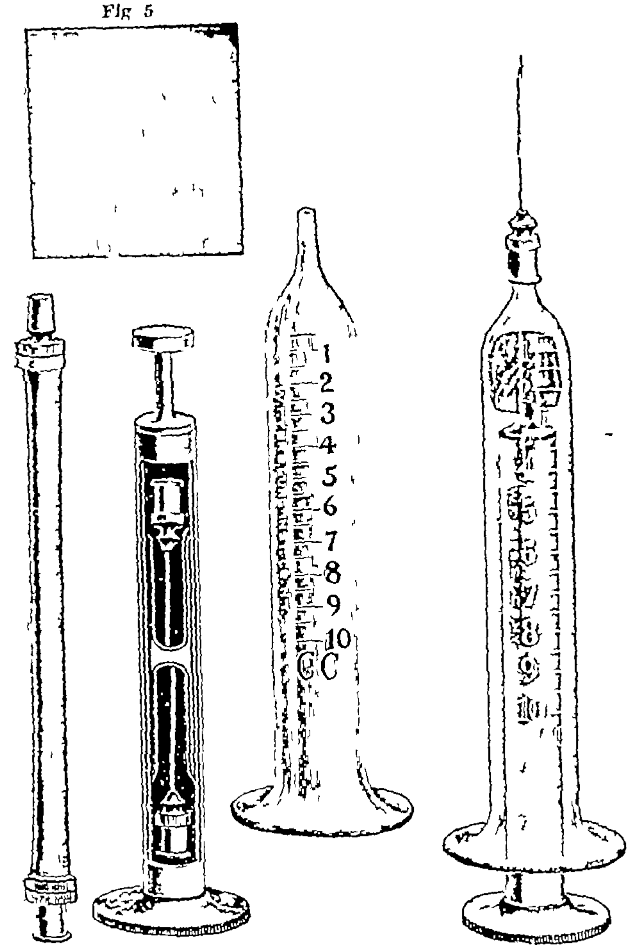

Fig 5

Fig 1 Fig 2 Fig 3 Fig 4

WHITE S ANTITOXIN SYRINGE

1 Rubber tube 2 Piston containing needles 3 Glass cylinder 4 Syringe ready for use 5 Rubber valve

IN CONCLUSION

The laboratory, with its animal experiments, the steps taken in the production of the antitoxin, the great mass of clinical evidence combined with the character of the source from which this evidence comes, leads me to believe that the antitoxin theory of the treatment of diphtheria when developed to its fullest possibilities, will prove an unfailing cure in diphtheria toxemia, and my own experience has been such as to convince me that using a reliable serum and with the exercise of ordinary care in administration, there is absolutely no danger to life through its influence upon any of the organs of the body

Hotel Endicott, West 81st Street and Manhattan Square

SOMETHING CONCERNING THE DIAGNOSIS AND TREATMENT OF FALSE CROUP

Read in the Section on Diseases of Children at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md May 7-10 1895

BY STARLING LOVING, M D
FIRST VICE PRESIDENT AMERICAN MEDICAL ASSOCIATION 1891
COLUMBUS OHIO

False, or spasmodic croup, or mild acute laryngitis with spasm of the laryngeal muscles, is one of the every-day respiratory diseases of early childhood It is seen at all times of the year, but is most prevalent in the changeable weather of autumn and in the early part of that season traditionally but improperly called spring

Every general practitioner sees and treats it, and, when diagnosis is correct, prognosis is uniformly favorable, and treatment successful Without correct diagnosis, prognosis is wavering, treatment is lame and the most uncomfortable person connected with the case, not even excepting the patient, is the medical attendant

Discrimination is to be made between false croup and diphtheritic croup, between false and true or membranous croup, and sometimes between false croup and acute laryngitis without spasm, and between false croup and laryngismus stridulus As true croup, laryngitis without spasm, and laryngismus stridulus are of infrequent occurrence The decision commonly lies between false croup and diphtheria

It would seem that differentiation should be easy, but the diseases in their most prominent symptoms resemble each other so closely as to make it often embarrassing Still, while there are many points of resemblance there are dissimilarities, which, if rightly interpreted, render valuable assistance

False croup is sporadic, and its course and termination preclude the idea of infectiousness It is so common that the practitioner is frequently called to two or three cases in a single day, yet it is never communicated, nor does it ever assume epidemic proportions

True croup is a rare disease, so rare that though one may see a case or two in the course of a month, he may not see another for a year or two It is sporadic, and is never communicated

Apparently sporadic cases of diphtheria are not uncommon, and at times there is difficulty in tracing the infection, but when sufficient pains are taken the history of the case is easily completed Ordinarily, there is no trouble, and when after the usual period of incubation, croupy symptoms develop, there need be little hesitation in regard to the diagnosis

The onset of all the diseases to which the name croup, has been given is sudden, neither has a well-defined prodromic stage nor symptoms, yet we find events in the early history of almost every case of each which serve to guide us in discrimination

False croup is frequently preceded a few hours or for a day or two by coryza and hyperemia of the fauces, which may be accompanied by feverishness or slight fever The child may be listless and drowsy, but is usually more animated and excitable than when well, and is not inclined to sleep at the usual hour In some cases the catarrhal symptoms are more diffused, the larynx and trachea are involved, and there is cough but without stridor or spasm Ordinarily, with the development of the croupy cough there is an increase of temperature and

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[1] Read before the Pediatric Section of the New York Academy of Medicine Nov 7 1894, and published in Medical Record, Nov 17 1894

[2] Medical Record Nov 17, 1874.

[3] Remarks before New York Academy of Medicine stated meeting April 4 1895, and Medical Record April 20 1895

ing and non intermittent hoarseness, by the change in the voice which is soon reduced to a whisper, by the cough, which at first resembles that of false croup, but soon loses the tubular quality and becomes hissing

The larynx is more fixed and more or less tender on pressure from without The epiglottis is red and swollen, so likewise are the aryteno-epiglottidean folds, and the rim of the glottis, and now and then the false membrane may be seen Cyanosis is slowly but surely developed, is noticeable first as in diphtheria in the ends of the fingers, at the tip of the nose, and lips, and finally becomes general The stenosis of the larynx increases, orthopnea develops, prostration becomes marked and without relief there is a steady advance to a fatal termination

Acute idiopathic laryngitis, non-exudative in type, and of more severe form than has been described is not of common occurrence As a secondary disease it is occasionally seen in connection with measles, and with scarlatina, or with other diseases Sometimes it is of traumatic origin It may be differentiated from false croup by the greater intensity and persistency of the fever, by expiratory and inspiratory stridor and dyspnea, and by the character of the cough, which, though hoarse and barking, is less resonant and tubular than that of false croup

Laryngismus stridulus, or child-crowing, is also uncommon, at least in Ohio It is a purely neurotic, afebrile malady always affecting anemic delicate children, with or without rickets It is distinguished by the character of its attacks, which come without warning, is wholly spasmodic, continues for a few moments only, and recurs at intervals, short or long, through a series of months or years The diagnosis having been established, the treatment of false croup is simple and satisfactory It consists of measures adapted to the control of fever, inflammation, and nervous excitement, including spasm of the larynx The old idea that emetics and nauseants are needful for the cleansing of the stomach, and the loosening and expulsion of false membrane, was of course not well founded, but such remedies fill better than any others the objects of treatment—sedation, laxation and increase of secretion Therefore a mild emetic, or at least a nauseant should be administered as the first measure, and no medicine is more popular, nor perhaps better adapted than ipecacuanha in the form of powder or other convenient preparation I prefer the powder After emesis, a laxative dose of calomel and soda should be given, and followed by small and repeated doses of ipecac and soda, triturated with sugar of milk until relaxation is complete, and the secretions from the mucous membranes have been excited to free flow

It has appeared to me that for the purpose of maintaining relaxation, ipecac in powder, with soda, is better than any other remedy or combination This is perfectly safe, and with proper regulation of the doses the needed effect can be uniformly maintained for many hours in succession without great distress to the patient Occasionally the ipecac, especially when calomel has been administered, causes sharp purgation which is of no disadvantage in cases in which there is high fever, but, in general, when the bowels become loose the remedy should be suspended lest undue prostration result Some prefer turpeth mineral as an emetic, others apomorphia, squills, the tartrate of antimony, alum, the gillenia or American ipecac, sanguinaria, etc There can be no objection to turpeth mineral nor to alum, nor possibly to any of the remedies mentioned, but I never feel quite comfortable, after using apomorphia, until I know the time for injurious influence has passed, and I never prescribe the tartrate of antimony which, even in small doses, causes disproportionate prostration in children When the fever is high, with or without the emetic, modern doses of aconite with the sodium bicarbonate, forms a combination which fills all the indications admirably Though so powerful, it is easy to regulate the administration of aconite so that unpleasant effects may be avoided

Antipyrin and antifebrin, are both effective remedies, causing quick, nervous and arterial sedation, decided increase of the secretions of the mucous surface and of the skin, and they are reasonably safe, provided their administration is properly guarded. They, however, sometimes produce much more effect than is desired, and therefore may not be used without misgiving

Pilocarpin has greater influence on mucous and cutaneous secretions than any other medicine, and has a sedative effect on the heart I think its influence on the heart (of small doses at least) is overestimated, and that, with prudence, it may be used in the treatment of croup without risk and with decided benefit The doses should be small, even proportionally, and should be frequently repeated until the peculiar effects of the remedy upon the skin and mucous membranes become manifest In a few cases in which I have prescribed it, the dyspnea and spasmodic cough diminished as soon as the skin became decidedly moist In one case in which the temperature was 104 degrees F, and there was great nervous excitement, a tepid pack, and a few doses of pilocarpin soon brought down the fever and reduced the other symptoms One hesitates, generally, before administering opiates to young children especially in the treatment of diseases which obstruct the respiration, and hesitation is wise, but in spasmodic croup the difficulty of breathing is due almost altogether to spasm of the laryngeal muscles, and not to swelling, so that an opiate, preferably the tincture of Dover's powder, with ipecac added, can not be considered an objectionable remedy The opiate should be administered immediately after the operation of the emetic The dose should be full and should not be repeated too quickly Often a single full dose will put an end to a violent paroxysm within an hour Of the use of red iodin of mercury and of belladonna, I know comparatively little, but they are esteemed good and appropriate

Local remedies are of little service, but every one prescribes them to please anxious friends '

The room should be well ventilated, and the temperature kept at 70 or 75 degrees F

Surgical interference is never necessary in the treatment of false croup

DISCUSSION ON PAPERS OF DRS FISCHER, WHITE, KOPLIK AND LOVING

Dr Griffith, of Philadelphia—This meeting brings up a reminiscence of the meeting of the American Therapeutic Society two years ago I was convinced that the New York men had seen a vast deal more of diphtheria than we Philadelphians had ever seen I am impressed with that fact again this *morning* When it comes to the treatment of diphtheria in a large number of cases, the Philadelphia members, to use a slang expression, are not in it I see Dr Welsh, of Philadelphia, here, who is the only one among us who sees a large number We all see isolated cases, but not enough to treat the matter thoroughly by experience gained from an accumulation of facts I have had the privilege of seeing some of the cases in the Municipal Hospital treated when Dr Fischer came to Philadelphia, and have watched the treatment by the authorities

As to the value of the antitoxin treatment in diphtheria, it seems to me without question a proper treatment, and that is uttered by one who is decidedly skeptical The treatment by antitoxin I at first received with scruples, and yet so many cases have been diminished in severity by this antitoxin treatment, that if I had diphtheria it seems to me I should like to have the antitoxin theory tried in my case

I was interested particularly in Dr Koplik's paper on lacunar diphtheria of the tonsils I have seen cases where the watchers in a family have been affected with diphtheria, and we are really forced to the conclusion that those suffering with diphtheria may communicate it to others Therefore, it has been my custom, for some time, with every case of lacunar diphtheria of the tonsils to tell the family as well as I can do so without alarming them that the child ought to be isolated until we can find out exactly the gravity of the malady I am sure that I have seen cases of diphtheria begin in that way and many cases follow

Dr Welsh, of Philadelphia—I have had limited experience with the use of antitoxin in diphtheria within the last few months I hardly know just the number of cases which have come under my observation but something over a hundred I have been exceedingly anxious that antitoxin should do all that is claimed for it I feel as we all feel, the great need of a remedy for this disease, and I was very glad to learn of the great benefits that had been derived from its use in Berlin and in Italy, and in Paris, New York and other places I have been looking for these benefits, watching closely for them, observing every case closely and looking for evidence to convince me of the great value that has been claimed for antitoxin I hesitate to express any opinion in regard to antitoxin to-day, but I will say I am disappointed in its use It does not come up to my expectations, and I do not see the results that have been claimed for it In a few cases, I have seen very good results follow its use, but whether it was because of its use strictly, I am not prepared to say, for we all know it is very hard to distinguish in these cases I have seen equally well marked improvement from other treatment I do not know that I am prepared to give any statistics I have not worked out these cases carefully, but I intend doing so hereafter In the first hundred cases I injected in the Municipal Hospital, I can not say that the death rate had been reduced to any great extent My resident physician informed me that our rate had been 25 per cent while the loss at the same time from the whole number of cases was only 2 or 3 per cent more I might add that I endeavored to select the most suitable cases for injection It is true that a great many of the cases do not come to us early enough I think that ought to be stated in justice to the claims made for antitoxin We have, however, received quite a large number of cases said to have been ill only twenty four hours Others were said to have been ill forty-eight hours, and so on We have tried to limit our injections, as far as possible, to cases that had not existed longer than say four days It is true some, however, have been injected where the disease had been of some duration As I tell you in a general way, the death rate among our cases has been 25 per cent as compared with about 27 or 28 per cent perhaps, during the same period as to the whole number of cases That of course would include cases injected with antitoxin, as well as the others We have excluded all severe cases, all malignant cases, in which there seemed to be no hope Having excluded all such in the antitoxic treatment, we therefore naturally expected that the general death rate would be higher as they were thrown out I will say, on the other hand, that we did not inject mild cases where we looked for recovery under any treatment They too have been excluded

Another subject has been touched on in this discussion, and that is the diagnosis in lacunar diphtheria as I understand it It very frequently happens that we receive in a hospital, a subject, showing this form of diphtheria well marked while another child of the same family will have well marked diphtheria in which there is variance, and sometimes from the same family will be admitted a case of membranous croup in which there is no exudate whatever to be seen in the process I have no reason to believe that diphtheria assumes all these different forms, and the specific microbe is present in each Tonsillitis cases sometimes so thought, are really cases of diphtheria I am convinced that frequently, a specific microbe is found in these cases of follicular tonsillitis

The Chairman—Whose serum do you use in Philadelphia?

Dr Welsh—We have used mostly Behring's No 2 We have used, also, some of Aronson's, and some of Mulford's, and two or three bottles perhaps of the serum prepared in New York Mostly, however, it has been Behring's

Dr Thomas, of Michigan—My practice is limited entirely to private practice, and to twenty five cases The community in which I live has a population of 5,000, but it is one which diphtheria has visited frequently Our mortality has been simply frightful, averaging 75 per cent during the last twelve years that I have lived there, although I think the treatment has been the true treatment Four months ago the epidemic started again For the first of these twenty-five cases I was unable to obtain any reliable antitoxin, although I made efforts to obtain it in New York, Philadelphia and Chicago Of the first eight cases, four died Seventeen I treated with antitoxin, and, without going into any details, I will state that in each of these seventeen cases the bacilli was verified, and I have had a recovery of 100 per cent (Applause)

Now, gentlemen, this may be merely a coincidence, but those were severe cases It is where antitoxin is used before the secondary septic symptoms manifest themselves that it is efficacious I do not think you can save a case of diphtheria after it has passed into the secondary symptoms, but with my experience, I am certainly an enthusiastic advocate of antitoxin

Dr Larrabee—We have certainly had an opportunity to profit by the discussion of this subject so far that it is hardly necessary to add very much to it The enthusiasm which surrounds new treatment of disease is well known and accepted Having been a participant in that enthusiasm in 1890, with tuberculin, and having been dampened in my enthusiasm for such treatment, I have been naturally going slow with new treatments since then Whenever we report every case getting well in diseases of a fatal nature, and no deaths, the mark of suspicion is upon us We ought to be watched for a while at least (Laughter)

There are cases of diphtheria and diphtheria, and there are cases of typhoid fever and typhoid fever, and there are cases of measles and measles, and you may call it all measles, but there is quite a difference in the nature of each case It might happen to a man that he had this success which has been related, and I do not doubt it Such success as 100 per cent of recovery, and not a Dutchman's 100 per cent either, is very remarkable It means that every case gets well Such an experience as that would be a very grand one, if we could carry it out The point seems to be that we have mild cases and severe cases We may have very considerable local trouble with very slight constitutional symptoms It is in these cases that we make a test of the treatment The point seems to be that in deciding in regard to this great new treatment we might derive a little profit even from a retrospect It has been about a hundred years since the greatest inroad was made upon disease by Jenner by vaccination But it must be remembered that Jenner shut the gate of death while the throng was going through Jenner's discovery was a perfect discovery of a fact which had been observed only by a limited number, but it needed no argument The shutting of the door against the tide of smallpox was a fact It swept the earth with great destruction in that time So in that we saw a perfect discovery needing no modification or building up Now, the point in these new discoveries, I believe is well taken I believe we are on the right track I believe antitoxin is a move in the same direction as Jenner's discovery, and I regret that the profession has been a hundred years in moving upon lines that were developed by the original discoverer We do not expect after a man has been suffering seven or eight days with smallpox to vaccinate him, and have him recover thereby Jenner did not do it, and nobody else can do it, but by immunizing with serum you have the best test of its efficacy Too much stress is laid on the arrest of the disease after it has taken possession of the system and become septic You might just as well vaccinate a man when he has already contracted the smallpox

My use of antitoxin is too limited to bring it into the discussion I can revert to but sixteen cases These cases all recovered In two cases where I did not expect recovery under the old treatment, I was very greatly pleased with the results The other cases, I believe, would have gotten well under the old treatment probably I can not tell That is a point we can never discuss Dr White discussed a case here that comes to mind I never diagnose a case of croup or tonsillitis with fever that I do not have a string tied to it, so that I may pull it back after two or three days if I diagnosed it as a simple disease The fact brought out in Dr White's paper comes home to all of us, where we at first think there is no danger, and that we have only a case of tonsillitis to deal with, and where the most pronounced symptoms of diphtheria develop afterward We have a case of sore throat out our way that we call drain sore throat It is easily contracted, and if you want to make it to order you can do so at any time, if you will dig a little pit at the back door of your house, and throw the dishwater into it for a few days, and let the July sun get at it You can then have this drain sore throat I have named the bacillus of this the seweronicus

The Chairman—What does it look like?

Dr Larrabee—It has four tails, and is exceedingly lively, and hops about on several legs (Laughter) This is a thing that is communicable, and that will reproduce its kind It is as contagious a form of sore throat as any other disease You have the affection of the tonsils You will have fever and a new set of symptoms coming on the second or third day

On the subject of false croup, I want to say with all kindness, that I hope our nomenclature of diseases will be changed some time or other The false things ought to disappear, and the true things come to the surface False croup is no croup at all I think that the nomenclature would be benefited by a thorough purgation We want to get rid of a nomenclature that can only lead to error

Dr Smith, of St Augustine—Are membranous croup and diphtheria to be allowed to stand as distinct diseases, or when are they to be considered otherwise? I would be interested to hear Dr Koplik on the subject

Dr Ingalls, of Chicago—I regret very much I did not hear the papers read I feel as the Doctor feels who has just spoken, that we are probably on the right path with antitoxin, but there are a good many points that should be considered by men who are making these experiments, that have not been explained satisfactorily to my mind, at least, up to the present time The matter of diagnosis is very important indeed, and in the reported cases which have come under my notice in the journals at large, only in a comparatively limited number were the diagnoses accurately made As I came to this meeting, a gentleman told me of some one in this community who had been treating a great many cases of so called diphtheria with antitoxin This gentleman did not belong to the regular profession, and his method was when called into a house where there was a sore throat, to pronounce it diphtheria, and immediately administer antitoxin The result of his experience was that those who had been immunized had had diphtheria, while there was no proof that any one in the community had had diphtheria, and I think a great many of our reports in the journals have to do with this sort of cases

I think the effort is in the right direction, but I do not think we have very much proof at the present time My own observation has been limited, so far as I have been able to observe, benefit has followed the use of these remedies, but the experiment as a rule has not, to my mind, been satisfactory, and I find upon consulting the literature upon the subject that among the profession who ought to know most of this—the gentlemen in France and Germany, differ upon it There is a good deal of division of opinion, about one fourth of them are very sure that antitoxin is a great remedy, and about three fourths are not at all sure of it

I find in my reading only one experiment that has much weight with me In this experiment, the antitoxin was given for a few weeks and there was great improvement in the rate of mortality, when the supply of antitoxin diminished the mortality increased, and when the antitoxin was gotten again, the mortality was again reduced The mere statement that beginning at a certain time, the death rate was 50 per cent, and beginning at another time the death rate was 25 per cent, is no proof whatever We all know that the death rate in diphtheria during a bad epidemic will run up to 60 per cent and sometimes higher We know that in the beginning of the epidemic the death rate will run up to 60 per cent and a week or two later drop to 35 per cent, and then be still further reduced until all recover

On this account the experiments have not been of much value It seems to me there ought to be experiments made that would be of some value If cases as nearly alike as can be selected were treated alternately by the different methods, we might then make comparisons of value These doctors who have been so successful might have gotten hold of cases at the end of an epidemic, and those cases might have recovered even if the physician had not been there at all I hope that we are in the line of developing something that will cure diphtheria Antitoxin is young, and like tuberculin, its estimate in our opinion may have to be revised I think, however, that a physician who has an opportunity to use antitoxin and does not use it is culpable We should give the patient the benefit of every chance where there is no risk

Dr Young, of Newark—I regard antitoxin as a baby with long clothes, from which I hope for much I believe it will grow to be large The test for diphtheria, I believe, is the microscope, and that should be carried out as a test I regard diphtheria a disease as we find it and not as a germ I regard diphtheria as a systemic affection, and not local I make no applications to the throat whatever, and the results seem to be good I find that less than one in ten die when that treatment is adopted I believe diphtheria is the development of a germ within the system, although you may call it, if you please, the ptomaine of diphtheria The result of my treatment has been good, it has been entirely systemic, relying largely upon the use of pilocarpin and good nourishment

Dr Weaver, of Pennsylvania—The remarks of the gentleman from Newark, as far as diphtheria is concerned, are excellent In my country diphtheria prevails very largely I often see in one day three or four cases of ordinary acute tonsillitis, and have come to look upon those cases as dangerous In the country districts we are compelled to protect ourselves better than you gentlemen in the city hospitals We have to protect ourselves on all sides I look upon those cases of tonsillitis from the standpoint of diphtheria, if the case does not turn out to be diphtheria we are safe, and if it does turn out to be diphtheria, we are still safe The results are excellent when the treatment is begun early Within two months, two cases have come to my notice where I have used antitoxin One was the case of a little girl 7 years old She had come from Philadelphia, where she had been exposed two weeks before The case seemed mild in its incipiency, and I treated it as one of diphtheria, and prescribed accordingly I visited the patient next day In the intervening twenty-four hours the disease had spread considerably, and it looked to me as if the child was going to die A consulting physician was called, and he told the parents, in my presence, that the child would die before the next morning I agreed with him I thought that this was a case for antitoxin if there ever was one We sent for some of Gittings' antitoxin I administered a large dose, and repeated the dose in twenty four hours The effect was immediate in bringing the temperature down from 102 to subnormal The gentleman who was called in said to me "Doctor, I think the case is going to die, but if the patient gets well I will credit it to antitoxin" He did not believe in antitoxin then The child had thrown its head back, and it was impossible to give it nourishment naturally This condition existed for twenty-four hours, but the child continued slowly to improve, and finally got well I am as sure as I can be of anything that this case was saved by the use of antitoxin

There was another child in the same household suffering from diphtheria, but not so ill as the one I have just spoken of That child died through the carelessness of the nurse in letting her fall out of bed I am sure that there is power in antitoxin Of course I can not tell from one case whether it is absolutely good or bad, but from my limited experience I consider it a good thing, and I am going to use it wherever I find a case that I think demands it

Dr Ingalls—I believe the gentleman who spoke this morning said that he hoped this experimentation would continue I must differ with him in regard to this being treated as an experiment When I was in Europe in 1891, Professor Behring, in a lecture on bacteria, said that he had discovered a substance known as antitoxin that would cure diphtheria This was after the period of tuberculin fame, and the reason the physicians in Berlin would not take hold of antitoxin was owing to the great failure of tuberculin, but as these physicians in Berlin would not take hold of the substance I did not bring any to New York

It is not a year and a half ago since Professor Werniger came to the Chicago Exposition and brought me some antitoxin He asked me to use it, but I was afraid to do so I had samples sent to me from various chemic houses They called it antitoxin, but I was afraid to use it I had not then heard of Aronson's I went to Europe last year, and found there two schools of treatment by antitoxin There are two factions One is the school of Behring, who manufactures antitoxin, and who claims priority, and the second is the Aronson faction, which is a rival school, also making antitoxin, but in a different way from the process followed by Behring At a recent meeting of the alumni of the Charity Hospital, we laid down the rule that Aronson's antitoxin should be used in a dose of 5 cubic centimeters injected into the interscapular region When I hear Dr Welsh speaking of No 2 antitoxin, I tell him that since I have had more experience I use only No 3 Behring's antitoxin for healing purposes, and No 1 for immunity When I was in the hospital in Philadelphia I asked Dr Welsh to use No 3 because it was more concentrated

One of the gentlemen remarked here that he selects the malignant cases in this treatment, and does not treat the mild cases with antitoxin I treat every case of diphtheria that comes along The moment I have a patient that shows an inflamed membrane or an inflammation of the larynx, I know then that I am treating diphtheria and am justified in using antitoxin My first report showed a percentage of 5.8 mortality At that time I had some very mild cases, and the first and second days of the disease I had excellent results My second report raised the percentage of mortality from 5 8 to 15 per cent, almost three times as great, and it was due to the fact that I injected every case I saw, whether moribund or not If I thought I could save a person from drowning by throwing a rope, why not do it?

Antitoxin and serum are not synonymous terms Toxin is a condition of the blood I would ask Dr Welsh to be kind enough to use the antitoxin that I send him, and use it without skepticism When I read a paper on March 4 before the German Medical Society, Professor Jacobi said that he was happy to see such honest statistics, and rather complimented me on such a high rate of mortality If I included all the cases I had, the mortality would have been very much less

Dr Larrabee mentioned a point in the case of immunity I had a case where I refused to inject antitoxin, where it was a bad case of septicemia, and the child must die anyhow Of course the antitoxin would have done no good The Doctor asked me whether we could save the other child with an immunity dose of serum I told him I thought so, and we injected the child and it remained immune In such cases we always inject one tenth of the healing dose of serum

Dr. White—I think we put too much stress on the importance and value of statistics I think every man who has had experience in the treatment of diphtheria with or without antitoxin, can make an intelligent comparison of the value of the two treatments without consulting any figures whatever I have seen something approaching two thousand successive cases of diphtheria in the last two or three years, many of them treated without antitoxin, and quite a large number treated with antitoxin and have absolutely no hesitancy in stating that where there was antitoxin treatment of diphtheria there was improvement in almost every phase of the disease, particularly in the incubation cases, also in those cases where there is some evidence of approaching sepsis I know without consulting any statistics that antitoxin has been a benefit in those cases

It was mentioned during the discussion here that in the literature upon antitoxin about one fourth, perhaps, of the statistics were in favor of the use of antitoxin, and about three fourths undecided Certainly my reading has not led me to believe the same way I think we have a large amount of evidence in the statistics from Paris and elsewhere that is valuable There is a large number of cases in the hospitals of Brooklyn, and it has been always noticed that the mortality has diminished upon the introduction of antitoxin, and that mortality increases after antitoxin is removed from the treatment The answer to that by those who are opposed to antitoxin, is that the epidemic is mild when the antitoxin is in use, and again becomes severe when the antitoxin is taken away But if that is going to continue, it is all the evidence I want for my belief in the use of antitoxin If the disease is going to become mild when antitoxin is used, then I say there can be no objection to the use of antitoxin

Dr Fischer asked me to speak upon the use of internal medication He brought out the point that he did not expect to remove the stenosis by the use of antitoxin I think we do remove it by the use of antitoxin, but it takes ten or twelve hours to get the evidence of relief I believe also that we should resort to other methods of relief—medical methods I see no reason why we should not use the same remedies as before Antitoxin is slow in bringing about its results I have always advised the use of irrigation of the throat with a pure plain water solution of soft water I have not obtained any good results from antisepsis

I also want to express my thanks for the remarks of Dr Koplik and Dr Larrabee on the subject of having the names changed with respect to these false diseases, such as false croup and false diphtheria I think we ought to treat all cases where the bacilli are present as diphtheria It can certainly do no harm

Dr Welsh—I want to ask Dr Fischer if I understood him to say that in the selected cases where he used antitoxin, the death rate has been 15 per cent, whereas if he took all the cases in which he used it, the death rate would be as high as 40 per cent

Dr Fischer—I said that in my first series of cases the mortality was 5 8 per cent and in my second series of cases, numbering 223 the mortality was 15 11 per cent and the higher rate of mortality I attribute to the fact that I was called in consultation in many cases that were hopeless and they begged me for the sake of the family to inject antitoxin although I considered them fatal cases before I injected the antitoxin I find in looking over my record of diphtheria cases, that the mortality was about 40 per cent or over 40 per cent averaging cases of so-called diphtheria—that is croup and diphtheria—in which antitoxin never had been used. Since the antitoxin treatment has been used, the highest mortality rate in 223 cases was 15 11 per cent

The Chairman—Does this 15 11 per cent embrace all your cases?

Dr Fischer—All that I have treated

Dr Koplik—We do not know yet of any set of clinical symptoms which will distinguish the lacunar diphtheria from ordinary tonsillitis, and for that reason where the conveniences are at hand, we should always make a pathologic test of the sore throat Where the conveniences are not at hand, I think the best way in all cases of sore throat is to resort to isolation

Dr Loving—I will say to Dr White and the other gentlemen that so far as my limited experience in the matter goes, my observation corroborates exactly the statements of the papers, namely that the antitoxin is a curative remedy Koch's tuberculin was a humbug I used it in forty-five cases of tuberculosis, and every single patient was made worse by it One of the gentlemen here asked Dr Koplik to state the difference between diphtheria and membranous croup I am not much of a microscopist but whenever I can, I call in a microscopist These gentlemen practice in hospitals in large cities My practice is largely among the country population where we are not quite so subject to infectious diseases as people living in the city I find once in a while a case of membranous sore throat, where it is impossible to trace any infection The case begins as a sporadic disease and ends as a sporadic disease In the few cases where I have called the microscope into use, we have found the bacteria, the ordinary corpuscles, and that is all I agree with the other gentlemen here that there should be a correction of medical nomenclature If I had the power, I should abolish all these forms of false disease, and call them by their proper names

HYPNOTISM, WITH SPECIAL REFERENCE TO HYPNOTIC SUGGESTION AS AN AID TO THE ANESTHESIA OF CHLOROFORM AND ETHER

BY CHARLES GILBERT DAVIS, M D

CHICAGO ILL

Time is the great sieve in which is sifted the accumulated thoughts of men In it the *débris* is removed and only pure sparkling truth remains It is strange, but nevertheless true, that every great scientific advance in every department of human life is met by the most determined, and I might say, brutal opposition And yet, as the years flow on, there is ever but one result for all these conflicts, for truth is and ever will be triumphant Gradually the ignorant, stupid and cowardly attack ceases, the smoke of battle passes away, the clouds are lifted, the din of contending voices is hushed and, lo! some fair, new form is ushered upon the scene, a living, breathing reality A new star is added to the galaxy of the scientific heavens

What can exceed the bitterness of the controversy that for many years has been carried on over the subject of hypnotism, or hypnotic suggestion? It is not my intention, in this article, to review the arguments, pro and con. The salient points are constantly brought before the minds of the intelligent members of the profession, through the medical journals of the day. Neither do I wish to enter, at the present time, upon an elaborate exposé of my views of hypnotism, as to what it is, how it acts, or its application to the cure of disease. All of this will be reserved for another article, which I hope to produce in the course of time. Suffice it to say, that for many years I have carried on my experiments with an idea of determining its merits, and now I am able to say that I thoroughly believe the nineteenth century has evolved no therapeutic agent or remedial measure, all things considered, more potent or more capable of beneficent results than hypnosis.

In my address on this subject before the Psychical Science Congress of the World's Congress Auxiliary, in 1893, I said: "Surgery and hypnotic suggestion will largely constitute the healing art of the future. It may not be in our day, it may be centuries hence, but it will come." I am not at all convinced that this was extravagant language.

But without wishing to compass the entire scope of the subject relating to hypnosis in its application to disease, I wish now to call attention to its efficiency as an anesthetic, and most particularly as an aid to the anesthesia of chloroform and ether.

Ever since I became a student of medicine I have recoiled from what I call the barbarous method of forced anesthesia. I remember some of my first experiences in witnessing surgery twenty years ago in a Cincinnati hospital. Here, the patient was brought in before the class and told to breathe the chloroform, and if he did not do it willingly he was compelled to do so by being held on either side by two stout porters, while the assistant placed a handkerchief over his face, held it there and poured on the chloroform. Convulsed with terror, screaming, struggling and pleading, his whole nervous system in a furor of fright he was finally *overcome*. My observations at the time, and I have never had reason to change them, were that this method itself was almost as much of a shock as an ordinary operation. Only a few days after I began my studies there, under just such circumstances as those I have described, I witnessed a death from chloroform. Suddenly, in the midst of all this contest between the patient and assistants, she ceased to struggle, became quiet and the porters released their hold. She was dead. The post-mortem, as usual, said, "fatty degeneration." The scene impressed me, and I am sure has been a life lesson to my profit. Since then I have administered anesthetics a great deal, and had it administered under my directions by assistants thousands of times. I have never had a death. I do not boast of this, I am only glad. But I have always advised gentleness—the calm, quiet, soothing method. A few years ago the old custom was to fortify the patient previous to the operation with a glass of brandy. I believe a few soothing, assuring words spoken into the ear of most patients at the time will, as a rule, do more good than all the drugs of the Pharmacopœia.

Ever since my boyhood I have studied with interest the subject of hypnotism under its various names, phases and aspects. It has had to me a peculiar fascination. Soon after beginning my medical studies and noting the anesthesia of many hypnotic subjects, the idea naturally presented itself of applying hypnosis to produce anesthesia. Frequently I was successful, but not sufficiently often to indicate that I could rely upon this method in all cases. I have performed a number of minor surgical operations, in which I used hypnotic suggestion with entire success, to produce anesthesia.

For several years the idea has seemed to me feasible of combining in all cases, hypnotic suggestion with the chemic anesthetic. I have been led to this from observing a number of cases during the last few years where such a combination was entirely satisfactory.

In 1888 I was operating on a case of fistula-in-ano. The subject was a man about 32 years of age, very nervous, pale and weak. He got upon the operating table with fear and trembling, begged of me not to give him the chloroform, and was inclined to abandon the operation. I went to his head, closed his eyes, passed my hand quietly over his brow and then made suggestions as to what I wanted him to do, and commanded him to go to sleep. In three minutes he was quiet. Dr. J. B. S. King stood ready with the anesthetic and I motioned him to proceed, while I turned to arrange my instruments. Dr. King immediately ejaculated, "why, he is already asleep!" He had only that instant placed the inhaler to his face. Sure enough, he was sleeping soundly. I proceeded with the operation, which occupied, perhaps, ten minutes. He suffered no pain, did not resist, and was easily aroused after I had finished.

Again about six months later, I had occasion to give an anesthetic to remove a number of wire stitches from the uterus of a patient on whom I had performed trachelorrhaphy. The lady was in a very weak, nervous and exhausted state. She dreaded the anesthetic from recollections of its previous unpleasant effects. I immediately resorted to suggestion till I thought she was quieted and then asked my friend, Dr. M. S. Leech, who was present, to proceed with the chloroform. But as he placed the inhaler to her face he exclaimed: "The conjunctiva is already insensible!" No more than a single whiff of the chemic anesthetic was given. She did not resist during the removal of the stitches, was easily aroused, expressing herself as having felt no pain. Soon numerous other cases followed, in some of which a few whiffs only of the chemic anesthetic were necessary, and others required a continuance of from five or ten minutes.

In July, 1894, I delivered before the Chicago Baptist Hospital Training School for Nurses, a lecture on anesthesia, and presented before the class at that time two young men whom I knew from previous experiments to be slightly susceptible to suggestion. The first, Y. M., a young man of slender build was placed on the operating table and told he was to be put to sleep. The proper suggestions were made, the dry cone was placed over his face, and he was told to breathe deeply. He soon slept soundly and the conjunctiva was insensible. No chemic agent was employed. The second, V. P., of strong vigorous constitution, mounted the table with an incredulous smile. I produced a bottle of water from my pocket, saying I would give him a newly-discovered and more powerful anesthetic. With strong suggestions he soon yielded and slept. The conjunctiva was insensible, and he showed every evidence of thorough anesthesia.

Recently, I have made careful note of a number of cases, both with and without suggestion The following, taken consecutively from recent clinical work, are sufficient for illustration

CASES WITH SUGGESTION AND ETHER

	Time		Time
Mrs N	12 minutes	Miss M M	12 minutes
Mrs C	8 minutes	Mrs G L L	8 minutes
Mrs J	15 minutes	Mrs J B B	7 minutes
Miss S	7 minutes	Mr J G	13 minutes
Mrs H M L	9 minutes	Mrs G D B	9 minutes

Average time from beginning of ether to complete anesthesia, ten minutes

CASES WHERE ETHER WAS EMPLOYED WITHOUT SUGGESTION

	Time		Time
Mrs W B	24 minutes	Miss D C	18 minutes
Mrs G H	20 minutes	Mrs G H B	18 minutes
Mrs E	16 minutes	Mrs W A D	17 minutes
Mrs I D	21 minutes	Miss S B	18 minutes
Mrs T K	18 minutes	Mrs W C B	20 minutes

Average time from beginning of ether to complete anesthesia, nineteen minutes

There is no doubt but that any one of these patients in either of the lists might have been anesthetized more quickly than they were But in no instance was there any effort at haste, and in each individual case all due precautions were used to insure safety I am sure that the patients are often overcome, asphyxiated, as it were, by shutting off the air and crowding the anesthetic in three, four, five and six minutes, but in all the above cases the correct gradual method was employed And so far as possible, exactly the same method was used in each individual case

It will be seen from these two tables that the time necessary for complete anesthesia, is reduced nearly one half by the use of hypnotic suggestion I have no doubt that with more care a much greater reduction might be obtained

The beneficial results from using hypnotic suggestion as an aid to anesthesia are obvious

1 It calms the nervous system, and fortifies the patient to withstand the surgical operation

2 It lessens the danger of shock

3 It lessens the time, and consequently the amount of anesthetic

4 The patient awakens as if from a natural sleep

5 I believe recovery in these cases is more rapid and satisfactory

There is a wide difference between individuals as to their susceptibility to suggestion On some it has but little effect, on others it enables us to reduce the chemic anesthetic more than half, and occasionally we meet cases where it is within itself quite sufficient

It can never, when properly used, cause harm Then why not always employ it? I can not conceive of a case where it can not be applied The more intelligent the patient, the more readily we may speak to the nerve centers and have them obey Still to the insane, to the idiotic, and the unconscious babe, we may make suggestions to the sleep centers by gentle motions and soothing tones

I believe that hypnotic suggestion will, in many ways, but most particularly as an aid to the anesthesia of chemic agents, prove a blessing to mankind

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THE MEANING AND IMPORT OF CASTS IN THE URINE WITHOUT ALBUMIN, AND THE INADEQUACY OF THE ORDINARY CHEMIC TESTS

BY LUDWIG BREMER, M D
ST LOUIS, MO

The microscopic examination of the urine, though resorted to more frequently now by the general practitioner than ten or twenty years ago, is still too little practiced and is underestimated as to its value by the vast majority of physicians In suspected cases of renal diseases or complications, the chemic test, frequently a very crude one, is relied upon exclusively, and in case of absence of albumin the verdict is rendered there is nothing the matter with the kidneys How erroneous such a course is on the part of the physician, what dangers it involves to the patient, what damage it may cause to the reputation of the medical attendant, and how important it is to the medical man to emancipate himself from a time-hallowed and pernicious delusion, viz, the all-importance of the chemic urinary tests, I shall try to demonstrate and emphasize in the following remarks

The diagnosis, albuminuria, is unscientific Albuminuria, as is well known is not a disease, but a symptom of a number of diseases Not only a variety of diseases but a variety of altered conditions still within physiologic limits, may give rise to the presence of albumin in the urine Thus a full meal or great bodily fatigue may cause it in some persons A certain percentage of cases of albuminuria during pregnancy also belong in this category

Now, in my experience and opinion, the presence or absence of albumin in the urine is not nearly of the diagnostic and prognostic importance, as the morphologic evidences of kidney disease, *i e*, the presence or absence of casts I venture the broad statement that a person who constantly or periodically passes urine containing casts, even without albumin, or perhaps albumin in chemically demonstrable quantities, is not in good health Such a person in my opinion has a damaged constitution, his kidneys are, to say the least, vulnerable The irritative process which gives rise to the formation of casts may not amount to an actual state of inflammation, above all there may not be the recognized somatic signs of fully developed kidney disease, and yet the subjective symptoms may be very pronounced They often are unaccountable, because sufficient importance is not attached to the presence of casts in the urine of such persons Many obscure and inexplainable nervous disorders of an apparently functional character are, however, rendered intelligible when viewed in the light of uremic or uro toxemic conditions A vulnerable kidney is naturally more easily disturbed in its function, more prone to perverted action than the normal one If it be true (and the trend of modern views and observations point in this direction) that there is an internal secretion in the kidneys, it can be easily conceived how, beside the deficient activity of the kidneys, causing a lack of elimination of the body's waste products, there may be a vitiated metabolic process in the kidneys, processes whose products are of a toxic character and when absorbed give rise to a multitude of nervous and mental symptoms From a single indisposition and malaise, from a slight soreness of the skin to the most torturing of neuraltant question was aseptic midwifery If aseptic midwifery were practiced in every case there would be no puerperal sepsis, no ophthalmia neonatorum

Dr W P Manton, of Detroit, had never had in his private practice a case of puerperal sepsis In reference to the use of the curette it is an instrument, if properly used, which is absolutely devoid of harm

Dr H W Longyear believes that when the uterus is packed full of gauze, it prevents the flow of mucus, blood and serum While more or less serum may possibly come away, fragments of placenta or blood clots will certainly be retained Rise of temperature, etc, should not be an indication for surgical interference in puerperal sepsis

Dr Wm H Myers, of Fort Wayne, emphasized the importance of differentiating between septicemia and pyemia in considering the subject under discussion

Dr C C Frederick said that out of forty cases of puerperal septicemia which he had seen in consultation in the last eight years, only two had died Nothing could be found in the uterus and there were hardly any localized symptoms

Dr James F W Ross, of Toronto, said the subject was of the greatest importance, inasmuch as a new craze at the present time had seized the profession, that of taking out the uterus in cases in which it is unnecessary, in his opinion, to remove that organ The pendulum had swung too far, as it did when the removal of the ovaries was undertaken for vague symptoms, and the Association should take some means of swinging it back again to its normal position

Dr W G MacDonald, of Albany, related a case in which he favored the use of the sharp curette

Dr Sherwood Dunn, late of Paris, France, said that in the Broca Hospital, Paris, there were 184 beds, 48 of which were devoted to obstetrical cases In his three years' connection with the hospital service there, no case of confinement had ever been followed by any septic condition

Dr A J Burgess, of Milwaukee, said in cases of uterine traumatism, especially in abortions, where there are retained septic tampons within the uterus, it is absolutely impossible to curette them away with a dull instrument He had seen the dull curette used for half an hour at a time, and yet two days afterward pieces of membranes or clots had come away, the size of a hen's egg With a sharp curette everything can be removed

Dr A H Cordier, of Kansas City, Mo, emphasized the importance of treating every case of puerperal sepsis as an individual one Where surgical interference is called for, it must be resorted to early if we expect to save lives

Dr G E Krieger, of Chicago, predicted that in time we would treat puerperal sepsis very much in the same manner as we treat diphtheria with serum

Dr J Henry Carstens, of Detroit, emphasized the importance of differentiating between the different forms of infection While the obstetrician may in some cases infect his patient, he believes in auto-infection He thinks a sharp curette is not necessary for removing the shreds of membrane or other *debris* that may be left

Dr Frederick Blume, of Pittsburg, said it had been proved years ago that in 50 per cent of healthy women there were found streptococci or other pathogenic microorganisms in the vagina He uses a sharp curette for curetting the uterus

Dr Marcus Rosenwasser, of Cleveland, Ohio, read a paper entitled, "Exceptional Location of the Blood Clot in a Case of Ruptured Ectopic Pregnancy" The case reported was an extremely interesting one, and it was presented with the hope that the knowledge of such possibility might prevent future confusion of an otherwise clear diagnosis

Dr H W Longyear, of Detroit, reported a case where a woman bled for several months On opening the abdomen, the cavity was found filled with blood and clots, and after a tedious operation he was compelled to leave some of the clots in the abdomen The patient died of shock some three or four hours after operation

Dr James F W Ross, of Toronto, reported a case of acute general peritonitis produced by the rupture of a suppurating clot After an ectopic gestation this clot was found lying in the neighborhood of the broad ligament, and was not in the least connected with the tube

Dr Edwin Ricketts, of Cincinnati, said the cases reported impressed us as to the importance of the earliest possible diagnosis The subjective symptoms should be more carefully considered

Dr W E B Davis, of Birmingham, related a case, the wife of a physician, who was delivered at full term of uterine pregnancy Then a mass was detected in the right lumbar region which continued to grow larger The patient was losing blood Operation revealed ectopic gestation The bleeding was easily controlled, a rapid operation done, but the patient died from shock Dr Davis also cited another interesting case

Dr Rufus B Hall, of Cincinnati, emphasized the necessity of early operation, or, at least, an early exploration in all instances of obscure abdominal disease After an experience of fifteen operations for ectopic pregnancy, he is more and more convinced of the necessity of early operative interference

Dr Thomas J Maxwell, of Keokuk, Iowa, called attention to transfusion with common salt solution to tide over severe cases of hemorrhage

Dr L H Dunning, of Indianapolis, followed with a paper entitled

RUPTURED INTERSTITIAL PREGNANCY

After describing the case in detail, the author drew the following conclusions

1 Ruptured tubo uterine pregnancy is more frequently fatal than ruptured tubal pregnancy, for the reasons that in the latter case the rupture frequently takes place through the abdominal end of the tube, in which case but slightly vascular adventitious tissue is torn, while in the former case vascular uterine tissue is torn Again, in tubal pregnancy not infrequently the rupture takes place through the inferior surface of the tube into the folds of the broad ligaments, and thus the amount of hemorrhage is limited, while in tubo uterine pregnancy such a rupture is rare

2 In ruptured tubo uterine pregnancy before the fifth month, unless the abdominal section is done early, the anemia will be profound, so that the patient will be unable to withstand any operation involving prolonged anesthesia and manipulation The operation should be as free from shock as possible

3 There is no pedicle to tie

4 All actively bleeding points must be secured by ligature

5 Mr Tait proposes hysterectomy as a proper procedure in such a case Unquestionably, if the patient is not too greatly shocked or anemic, such procedure would be clearly indicated

6 As a measure attended by less risk of shock, the writer proposes the tying of bleeding arteries, clearing the gestation cavity of the ovum, the establishment of free communication between the gestation cavity and the uterine cavity, the establishment of free drainage by means of tube and gauze, and finally the closure of the rent in the uterine wall by deep and half-deep sutures, or by Czerny and Lembert stitches, or instead of this method of closure, the stitching of the walls of the gestation cavity to the lower angle of the incision with the drainage from above and through the uterine cavity, and finally closure of the upper opening by tying deep sutures placed and left untied at the time of the operation This latter method will probably be found applicable only in a limited number of cases, namely, in those where the uterus is freely movable and can be brought to the abdominal wall without tension Whether the methods proposed by the writer have ever been employed, he does not know, and whether they will prove of value, a trial must demonstrate

Dr T J Watkins, of Chicago, had met with a number of cases of extra-uterine pregnancy, but none of interstitial pregnancy with rupture He had one case where the tube had ruptured, the placenta had grown fast to the cornu of the uterus, and where it was impossible to form a pedicle, the condition in the case being similar to that of an interstitial pregnancy

Dr Byron Robinson, of Chicago, was fortunate enough to examine a specimen of Mr Tait's So far as operating on these cases is concerned, it seems to him that anything other than hysterectomy means death to the woman

Dr Henry T Byford, of Chicago, said that while he had never encountered a case of interstitial pregnancy, it was very essential to know how to proceed in such cases by surgical interference

Dr A H Cordier, of Kansas City, Mo, had seen one case of interstitial pregnancy in the practice of Dr Lanphear, the uterus containing in addition several fibroids An abdominal hysterectomy was performed

Dr E T Tappey, of Detroit, read a paper entitled "Intra-Peritoneal Adhesions" He said that abdominal surgery in the last few years had established among other things, that many of the pains, vague uncomfortable feelings and so called dyspepsias are caused by adhesions of various organs in the abdominal and pelvic cavities The question of diagnosis is often perplexing, and in many instances impossible without abdominal section Wherever there is pain and palpation does not reveal any tumor or other enlargement, adhesions are one of the possible causes The author believes it proper to subject cases of chronic dyspepsia chronic and obstinate constipation, and cases of persistent pain which is caused by the accumulation of flatus, to exploratory incision to determine whether there be adhesions and for the purpose of severing them

Dr W G MacDonald, of Albany, read a paper entitled

INTESTINAL OBSTRUCTION—CLINICAL OBSERVATIONS

He said in no branch of abdominal surgery is precise diagnosis so difficult or operative procedures more taxing to the ingenuity of the surgeon At the present time, surgeons of experience are quite unwilling to give a definite opinion until the abdomen is opened and closed There are a large group of cases of ileus which may be regarded as purely symptomatic, a condition in which the continuity of the intestinal tube is interrupted, but the obstruction is due to conditions of paralysis in the intestinal wall The treatment can not always be preventive from conditions which arise during operations The enucleation of pus tubes or an extra uterine pregnancy involves the leaving of extensive denuded surfaces to which intestines readily attach themselves and those who have done secondary section can readily testify to the number of innocent adhesions found as a result of primary operations

A CLINICAL CONTRIBUTION TO THE STUDY OF THE LATERAL DISPLACEMENTS OF THE UTERUS

Dr. Edward J Ill, of Newark read this paper After reviewing the literature, the reader speaks of the importance of this abnormal condition, and thinks it has been generally overlooked, the patient's symptoms being attributed to other ailments He had collected from his last year's office case-book all cases of lateral displacements except such as come with tumors He shows that 14.2 per cent had lateral displacement He draws especial attention to those cases which he considers to be congenital and where the pain is *referred to the elongated broad ligament* The symptoms begin early in the patient's sexual life, in severer cases *progressing gradually to complete invalidism* He then relates *in extenso* several histories He describes a typical case The non operative *treatment consists of endeavoring to* elongate the shortened ligament by the use of dry wool or oakum tampons pushed between the cervix and ilium *on the* side of the shortened ligament, keeping the tampon in place by a second and third one All this is to be retained for forty-eight hours A hot douche with the patient on her knees and elbows twice daily when the tampons are *in situ*, is also ordered He related two cases of extreme suffering where total extirpation of the uterus, tubes, ovaries and broad ligament was deemed advisable after years of unsuccessful treatment, both of which are much relieved of their suffering

Dr X O Werder, of Pittsburg, read a paper on

SOME OF THE INDICATIONS AND ADVANTAGES OF VAGINAL HYSTERO-SALPINGO OÖPHORECTOMY

He said the operative results in suppurative disease of the pelvis in the hands of the abdominal surgeon form one of the proudest chapters of modern surgery While a more careful *technique* and a more thorough operation has lessened the number of fatal cases, they had not been entirely eliminated *Hysterectomy with salpingo-oöphorectomy* in suppurative disease of the pelvis not only allows us to remove the nidus of infection more completely but it gives the patient the very best chance for complete recovery without adding any additional risk to the *operation The mortality* compares favorably with that of salpingo-oöphorectomy alone He thinks hystero-salpingo oöphorec*tomy* is unquestionably the operation of the future, but whether vaginal or abdominal, still remains *sub judice* The vaginal method has many features to recommend it It precludes the possibility of ventral hernia and intestinal and omental adhesions to the line of incision, is followed by less shock because of the minimum exposure of the peritoneum during the operation, and absence of manipulation of the abdominal viscera Convalecence is more rapid and recovery more complete Two cases of vaginal hysterectomy were then reported by the author

The President, Dr J Henry Carstens, of Detroit, delivered his Address He selected for his subject

THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS

The Address was replete with interesting points concerning the growth of the Association In speaking of specialists he said "What we do is not for us, but for the whole profession We think we can do more by limiting ourselves to a particular branch, and what little mite we add is not for us specialists, but is to be the inheritance of the whole profession We want the whole profession to be elevated, to become accurate and as near scientific as possible in medicine We want to raise medicine in the estimate of the laity, so that it shall not be laughed at and ridiculed in the pulpit or court room, but that it shall shine forth as an art and as a science and the noblest vocation"

Dr F Blume, of Pittsburg, read a paper entitled

ETIOLOGY OF ECLAMPSIA GRAVIDARUM

He said the etiology of this grave complication of labor is still undecided The theory, which has found the most advocates, is based upon the investigations of Lever, who first called attention to the relations between albuminuria and puerperal convulsions Lever's observations were confirmed by various authors and led to the view that the attacks were the result of blood poisoning by urea, that they were uremic and identical with those occurring in kidney diseases According to Spiegelberg, all cases of true eclampsia are of uremic origin The cause is a kidney lesion which either preëxisted or developed during pregnancy In 400 cases of eclampsia observed by Olshausen, Dührssen and Gusserow, albuminuria was present in 98 per cent Trantenroth found that albuminuria developed during the second half of gestation in 46 per cent in women whose kidneys were normal before conception took place

THE PROPHYLACTIC TREATMENT OF ECLAMPSIA GRAVIDARUM

This paper was read by Dr H W Longyear, of Detroit The author recognizes two varieties of convulsions that may occur as a result of the pregnant or puerperal condition—first, those of a purely nervous character, which usually occur in women of neurotic habit, and those who are predisposed to epileptic attacks, and second, convulsions which occur as a result of some change in the blood and tissues of the patient due to renal disease, as especially indicated by the presence of albumin in the urine

Early diagnosis is of the utmost importance to the success of any preventive treatment, and to insure this the urine of every pregnant woman should be systematically examined by the physician every two weeks after the sixth month When albumin is found to be present, immediate treatment should be begun and daily examinations of the urine made *thereafter* The author divided the prophylactic treatment into dietetic, medicinal and operative, the latter to be adopted as a last *resort* In simple cases of albuminuria without scanty secretion, many patients will do well and be *tided along to safe confinement on* an exclusive milk diet with medication

Dr W P Manton, of Detroit, *followed with a contribution* entitled

SO CALLED PUERPERAL ECLAMPSIA IN ITS RELATION TO INSANITY

The author had recourse to three sources of information—statistics from private practice, statistics from the lying-in hospitals, and the records of hospitals for the insane Never having had a case of insanity following eclampsia in his own practice, he had collected 8,868 cases of delivery reported by eight competent observers, published in current medical literature In this number he found that eclampsia is noted as having occurred thirty-*three times In not a* single instance is it stated that insanity followed the convulsive attacks During the four years 1891-1894 *inclusive*, 282 women were delivered in the wards of the Detroit Woman's Hospital, eclampsia occurring in 2 cases Both of these recovered without symptoms of mental alienation This seems the more remarkable, since of the 282 patients confined, 233 were unmarried During the same period there were admitted into the three principal asylums of Michigan *with which he is connected*, 1,271 female patients In this number, the insanity was attributed to puerperal causes in 110 instances, *but in two cases* only was eclampsia put down as the exciting cause

Dr Rufus B Hall, of *Cincinnati*, Ohio, read a paper upon

THE PREVENTION OF PELVIC INFLAMMATION IN WOMEN

He pointed out some of its most frequent causes, placing septic infection following abortion and gonorrheal infection as the most *important* He advocated the dissemination of knowledge among the laity by the family physician as a potent remedy for the prevention of these troubles He especially advocated that women should be warned by their physicians of the great *danger of* abortions in the early months of pregnancy It is well recognized by the profession that many married women produce abortion in the early weeks of pregnancy, and it is during this time that the membranes are retained and septic endometritis is induced, leading to salpingitis, pyosalpinx, and suppurating ovaries later He also advocated that the profession should impart knowledge on every legitimate occasion on the subject of gonorrheal infection in young men and boys It is well known that men frequently infect their wives, years after they themselves believe they are cured of their gonorrhea The author believes that if the profession impart this knowledge to the laity, it will only be a short time when many of the abdominal sections now made for the relief of inflammatory diseases will not be called for

Dr A H Cordier, of Kansas City, Mo, read a paper entitled

DIAGNOSIS OF INTRA-ABDOMINAL TUMORS

The author outlined the methods and procedures which should be followed in examining patients Tumors through which gases are detected by gurgling indicate either an involvement of the bowel in the tumor, or pressure of the growth on the bowel with adhesions to the same If this symptom be coupled with a history of a pyloric cancer or a cecal growth, it is confirmatory in its indications Some growths have a disposition to change positions, but all growths have one or more attachments, and it is safe to infer that this attachment is to the site at which the neoplasm had its beginning, and its movements will be only around an arc of a circle with the pedicle attachment to the diagnostic point Adhesions may prevent a growth from moving, or may anchor a tumor in a locality far from its original point of starting The history of inflammatory attacks and the pain will come to the rescue here The character of the pain and the amount and area of tenderness are invaluable aids The withdrawal of free fluid from the peritoneum will often show the presence of a tumor before undetected Pus in the pelvis is one of the easiest conditions to diagnose

Dr James F W Ross, of Toronto, read a paper entitled

PNEUMO PERITONEUM

The author reported a very instructive case of this disease He classified pneumo peritoneum as follows First, *tympanites intra-intestina* Second, *tympanites extra intestina* (*a*), traumatic 1, from without, 2, from within (*b*), non-traumatic, or spontaneous 1, without liquid, gas odorless, 2, ascites and gas odorless or fetid, 3, pus and fetid gas Third, *tympanites intra et extra intestina*

With regard to the treatment, exploration by means of a knife and the finger is free from the objection that obtains in the case of a stab in the dark by a trochar In all of these cases the author believes an exploratory celiotomy should be performed Even after the removal of the pressure on the diaphragm the breathing improves It has been stated by one operator that it is necessary in puncturing such cases to allow the gas to escape very gradually

Dr Herman E Hayd, of Buffalo, reported a case of

LARGE HYDRONEPHROTIC CYST SIMULATING OVARIAN TUMOR—ABDOMINAL HYSTERECTOMY, FOLLOWED BY RECOVERY

This case was interesting 1, on account of the large size of the hydronephrotic cyst, as well as the absence of pain or distress in its formation, 2, the obscurity of diagnosis, or, at all events, the simulation of the cyst with ovarian tumor, 3, the increased functional activity of the one kidney—in fact, its ability to vicariously functionate for the other organ, 4, the ease and facility with which the tumor was removed through the abdomen, and the uninterrupted convalescence for thirteen days, 5, at no time was albumin found in the urine, and quantitatively and qualitatively the secretion of urine was above the average At one testing, she passed 287 grains of urea in twenty-four hours There was no evidence of stone or symptoms of previous ureteritis

Dr Wm H Myers, of Fort Wayne, Ind, read a paper entitled

THE LIMITATION OF CRANIOTOMY

The author said that of late years the happy results following Cæsarean section and Porro's operation have done much to efface a dreadful feeling that we must in such cases decide whether the life of the mother or that of the child is to have preference, seeing it is now quite possible to save both The high death rate after craniotomy we must refer to the period preceding the introduction of asepsis and antisepsis The fatality of Cæsarean section has radically changed owing to the modifications in the treatment of the uterine wound, and a perfect technique, these have lowered approximately the death rate to that which is claimed for difficult embryotomy, a mortality of 10 per cent with the saving of 95 per cent of infantile life The author urges that Cæsarean section should be performed as soon as we can be assured of diagnosis

Dr Edwin Ricketts, of Cincinnati, reported three cases of gall bladder surgery, and drew the following conclusions 1, the continual absence of bile in the intestinal discharges does not necessarily signify that there is no operative condition of the gall bladder existing, 2, the bile may flow periodically, and when this is true, symptoms demanding surgical interference are generally present, 3, jaundice, when present, is very satisfactory evidence of biliary obstruction, although it is not always present, 4, pains in the region of the gall bladder coming on at intervals and in connection with jaundice, or without jaundice, in connection with clay colored stools, is positive proof of biliary obstruction, and when this is true, an operation should be resorted to, 5, persistent clay-colored stools, whether we have severe pain or jaundice with them, are the most reliable symptoms governing operative interference, 6, when a stone is primarily engaged in the gall bladder, then a pathologic lesion begins, 7, we may have an obstruction of the common duct due to external trauma, such as a blow received over the region of the liver This may produce a catarrhal condition of the common duct amounting to entire stoppage of the flow of bile, 8, we may have a solitary calculus engaged in the lower end of the gall bladder, causing thickening of the bladder wall and causing periodical escape of the infected or non infected contents, 9, we may have calculi formed in the hepatic or common duct, 10, the importance of probing the hepatic duct through the incised bladder in all cases operated upon, whether the condition present be catarrhal alone or with the presence of stone

Dr W E B Davis, of Birmingham, Ala, contributed a very interesting paper entitled

OPERATIVE PROCEDURES FOR THE RELIEF OF OBSTRUCTION OF THE BILIARY DUCTS

The author alluded to a large number of experiments which he had made on dogs, and in which he had tested the value of gauze in draining bile in injuries of the gall bladder and ducts He reported cases where he had removed the gall bladder without tying the duct by packing with iodoform gauze The animals got well In other instances where he incised the gall bladder and ducts and packed with gauze around the openings, no stitches being used, the animals recovered Complete walling off of the general cavity was noted when the abdomen of the animals was re-opened A number of cases were examined at the end of forty-eight hours Dr Davis also reported a case on the human being in which he had removed the gall bladder and a portion of the cystic duct where there was obstruction in the common duct, packed with gauze after introducing a glass drainage tube, and there was also complete walling off of the general cavity He advises that in cases of obstruction of the common duct that no attempt should be made to suture the opening after the obstruction has been removed, as the patient's condition is nearly always serious and a prolonged operation will terminate fatally The obstruction should always be removed, if possible Dr Davis' experiments demonstrate conclusively that the peritoneum is capable of taking care of a small amount of bile, but that large quantities or the constant extravasation of it will produce a fatal peritonitis usually in twenty four to forty eight hours He thinks the field of cholecystenterostomy is a very limited one

Dr W B Dorsett, of St Louis, read a paper entitled

THE USE AND ABUSE OF THE UTERINE CURETTE

The more the author had used and seen used the uterine curette, the more he was impressed with the following ideas that when used, the selection as to the shape and form of the instrument in a given case is not *always a wise one*, that a proper knowledge of its use should be obtained before trying to use it, that it is not a cure all Its use should be only in conjunction with other treatment He looks upon the blunt curette (as sold in the shops) as a dangerous instrument The instrument with a sharp cutting edge, properly constructed, is a most useful one, and in the treatment of intra uterine inflammatory conditions is the *sine qua non* of success In order to secure a good scraping instrument the sharp edge should stand at an angle of 60 degrees to the shaft or handle A greater angle will not scrape thoroughly, and a lesser angle is liable to incise the uterine wall unless used with a great deal of care Cases of perforation of the uterine wall are on record, and he thinks they are due to want of care in the selection of the proper instrument The dull or blunt curette should never and under no circumstances be used

Dr Thomas J Maxwell, of Keokuk, Iowa, followed with a paper on

SOME ANOMALIES FOUND IN ABDOMINAL SURGERY

In the first case reported by the author, he made an incision in the linea alba and discovered a reddish tumor quite unlike a pearl colored ovarian cyst The tumor was about seven inches in diameter and proved to be the uterus containing an interstitial fibroid An incision about four inches in length through the anterior fundus was made and a white fibrous tumor was shelled out with the fingers, of the dimensions of a cocoanut The incision into the uterus was closed with buried catgut sutures, fortified with one silk suture in the center of the cut A large ovarian tumor was then brought into view attached by a very broad pedicle to the right broad ligament The tumor was emptied of its contents two and one half gallons, and proved to be a monocyst The author thinks the surgeon of to day would have performed an hysterectomy He believes it is the first case where an interstitial fibroid, complicating a large ovarian tumor was enucleated, leaving the uterus intact He is of opinion that many uteri and their adnexa might be preserved by a similar procedure, and the patients left unmutilated The patient recovered Two other interesting cases were reported

SHOULD INTRA UTERINE INJECTIONS OF GLYCERIN BE USED FOR THE INDUCTION OF LABOR?

This paper was read by Dr B M Hypes, of St Louis The author concludes that these injections are often inefficient, especially so in doses under 50 c cm They are liable to be followed by shock, air embolism, thrombosis, metritis and sepsis They may and sometimes do produce glycerin poisoning—that is, decomposition of the blood corpuscles, resulting in diseases of the various organs but more especially in nephritis with hemoglobinuria The method involves no consideration of the life of the child and hence results in great mortality Its use should be abandoned, or the dosage reduced, especially in subjects with prior existing kidney affections

Dr M B Ward, of Topeka, Kan , read a paper entitled,

HAS GYNECOLOGY RECEIVED JUST RECOGNITION AS A SPECIALTY?

The purpose of this paper was to call attention to the efforts necessary on the part of the Fellows of the Society, and other members of the profession, to elevate to a position with the other specialties the standard of gynecology, and at the same time to discuss the best means to educate the profession and laity to the all-important truth that to be a gynecologist one can not at the same time be a general practitioner As specialists, our duty is clearly in the line of spreading the gospel of truth regarding the proper methods of examination and treatment of the numerous diseases peculiar to the female sex, in order that every physician shall have a reasonably intelligent understanding of the methods of dealing with the simpler forms of diseases Dr Ward said the line must be drawn, and when once fixed, strictly followed, before we can expect to command and receive just recognition as gynecologic specialists This advice must naturally mean a great financial sacrifice on the part of those who have been combining the entire field of surgery with gynecology Such a sacrifice, however, will be as bread cast upon the waters to return after many days It may even temporarily almost take the bread from the mouths of our children, nevertheless it is the only course to pursue if gynecology is ever to be recognized as a specialty whose disciples shall receive the encomiums to which they are justly entitled

Dr L H Laidley, of St Louis, Mo , read a paper entitled

SURGICAL TREATMENT OF PERFORATION OF THE BOWEL IN TYPHOID FEVER

The author in reviewing this subject concludes that an early diagnosis and operation offer the greatest chances for recovery If perforation of the bowel exists, it is the duty of the surgeon to make an exploratory incision, close up the opening and cleanse the abdomen The more rapidly the operation is made in closing the perforation which is usually single, and because of the danger in prolonging the operation, the better In selecting a method for the closure of the perforation a Lembert suture should be used in small openings, in the larger openings, when the lumen of the bowel is contracted by the use of the interrupted suture, resection with the use of the Murphy button is the most advisable course to pursue The author urges that greater interest be taken in educating the profession to select the cases, many of which are overlooked, to be placed in the hands of the surgeon and thereby reduce the mortality less than 100 per cent which heretofore has prevailed

Dr J B Murphy, of Chicago, followed with some remarks on "Typhoid Peritonitis," in which he reported some twenty-eight cases that had been operated upon by different surgeons A case reported by Dr Van Hook, of Chicago, was the first to recover Another case was operated on by Dr Abbe, and one by Dr Ill, both of which recovered Dr Murphy also reported cases upon which he had himself operated, which were followed by recovery He holds that early diagnosis and prompt operative interference offer the greatest chances for recovery

Dr H W Longyear, of Detroit, read a paper entitled

KRAUROSIS VULVÆ—A CONTRIBUTION TO ITS PATHOLOGY AND THERAPEUTICS

All of the cases of this affection seen by the author had been in women who had passed the fortieth year, and in each case the symptoms were manifested coincidentally with those experienced by the patient due to the menopause In the first case in which he recognized the disease the woman was still menstruating although irregularly, and the symptoms of the kraurosis had troubled her for about a year, the local appearance of the disease indicating that it was in an early stage of development In the second case the symptoms had been manifested for six or seven years, the patient's ovaries having been removed two years before he saw her, and before the menstrual function had entirely ceased, and the kraurosis was found to be in the advanced stage of atrophy In the third case the symptoms of the disease began with the cessation of the menstrual function, and when examined by the author four years later, the kraurosis had attained what might be called, for comparison, the middle stage The author then dwelt upon the treatment of this affection, which is both operative and medicinal

NEURASTHENIA ACCOMPANYING AND SIMULATING PELVIC DISEASE

This was the title of a paper contributed by Dr C C Frederick, of Buffalo The author defined neurasthenia as an exhaustion of the nervous system, more particularly the sympathetic nervous system, due to malnutrition After dealing with the symptoms encountered, he said there was a class of women in whom neurasthenia simulated pelvic disease It occurs in those of a nervous temperament It is a frequent ailment among our American women It is seen alike among the rich and the poor, the fleshy and rotund, as well as the thin and spare of form With reference to treatment, to correct so far as possible the habits of the patient which lead to nerve tire, general tonic treatment and good environment, and above all, the rest treatment of Mitchell, bid fair to do as much for these women as human skill had thus far devised Many of them can be nearly or quite cured, and others only partially relieved Removal of tender tubes and ovaries which are simply tender and not diseased, always adds to their suffering

The following officers were elected

President, Dr Joseph Price, Philadelphia, Pa

First Vice President, Dr A H Cordier Kansas City, Mo

Second Vice-President, Dr Geo S Peck Youngstown, Ohio

Secretary, Dr Wm Warren Potter, Buffalo, N Y

Treasurer Dr X O Werder, Pittsburg, Pa

Judicial Council, Drs C A L Reed, James F W Ross, L S McMurtry, A Vander Veer, and J Henry Carstens

On motion, the Association adjourned to meet in the city of Richmond, Va , the second Tuesday in September, 1896

Chicago Pathological Society

Regular Meeting, June 10, 1895

Weller Van Hook, M D , President, in the chair

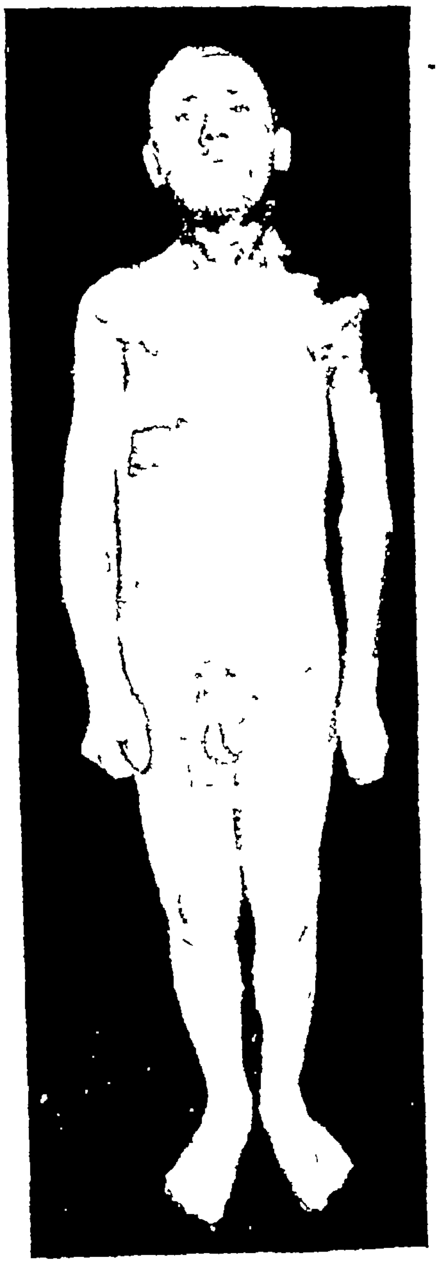
(*Concluded from p 499*)

Dr Arthur R Edwards, of Chicago, read a paper on

A CASE OF SYRINGOMYELIA WITH BULBAR CERVICAL AND LUMBAR LOCALIZATION AND ARTHROPATHY OF CERVICAL VERTEBRÆ

The patient is a Bohemian, single, aged 25 years, and a shoemaker by profession He has been in America two years and has had no previous disease His father died at the age of 70 , his mother is in good health No nervous nor other disease exists in the family of patient Uses beer moderately and denies any venereal history

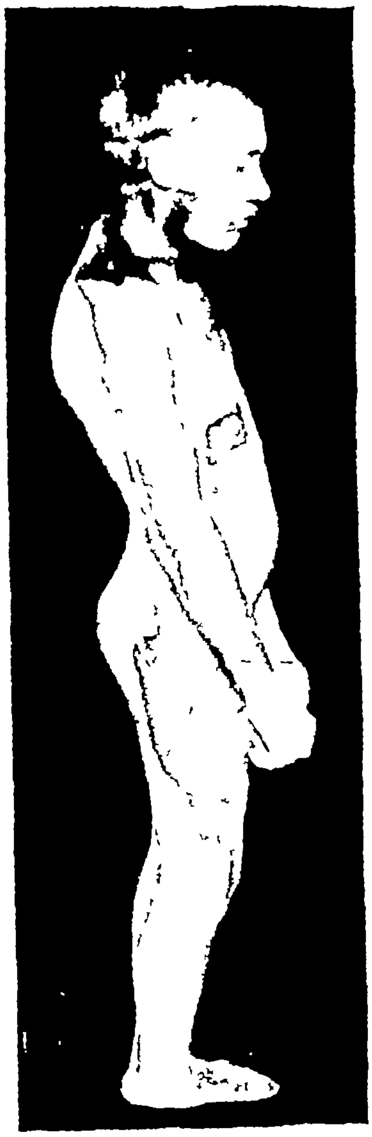
The present trouble began in May, 1893, two years before entrance into Cook County Hospital, with gastric disturbance, vomiting and eructations Hematomesis is also recounted At the same time, cramps and stiffness were observed in the arms, and in December 1893, rigidity in the legs was noticed Fibrillary contractions appeared in the arms in direct ratio to a loss of their muscular power Formification appeared eight months ago in the arms and had just been noted in the legs Constipation has existed for one and one-half years In December, 1898, a disturbance in speech alarmed the patient, but the troubled lasted only three weeks Four months later, dysphagia prevented the patient from drinking or eating fluid foods with any facility and at the present time swallowing is only effected by flexing the head strongly upon the sternum The patient at ders He has noticed no intellectual alteration The forearms tributes his loss of power to carrying loads upon the shoul- paralysis appeared at once on both sides The spinal deformity appeared a year ago, after other symptoms had inaugurated the disease The patient suffers from no pain over the spinal deformity, but rheumatic pains exist in the arms and over the trapezii muscles Pains radiate from the



shoulders into the arms, but are not severe and are most frequent in warm weather Slight pain has been experi- enced across anterior surface of ankles Regarding sensa- tion, the patient has observed that he can not feel well over the left sterno cleido mastoid muscle

Physical examination scalp, skull, nose and ears negative In pharynx, the examining finger detects a hard swelling corresponding to the spinal deformity Tongue negative , also teeth, skin, lymph glands and joints The pupils are equal and react perfectly to light and accommodation Ocular muscles Ophthalmoscopic examination negative Muscles of and facial muscles normal Intellect bright Sterno mastoids prominent on both head and neck normal Marked spinal prominence in cervical region, sides of neck Marked spinal prominence in cervical region, involving lowest three cervical vertebræ, convex posteriorly, admitting of motion in all directions without pain and

tenderness Shoulders can not be elevated very well There is marked atrophy in trapezius, rhomboidei and lv anguli scapulæ group on both sides Also atrophy and paresis in deltoid and pectoralis muscles Adductors of shoulders quite strong Extensors and flexors of elbow and supinator and pronator group fairly preserved Finger flexors distinctly weak, especially on the right side Fingers firmly flexed and rigid, resisting passive and active efforts at extension The wrist joints can be flexed and extended, but not when any considerable resistance is exerted by examiner Adduction and abduction of fingers, good upon the left and limited upon the right side Moderate respiratory expansion Abdominal muscles weak (constipation) Flexors of trunk are weak while the extensors are strong Flexors of thighs are normal on the left and somewhat weak on the right side Extensors of both hips weak and considerably spastic Knee extensors somewhat weaker, right than left, and the flexors of the same joint are markedly weaker on the right side The ankle joints can be extended and flexed with moderate freedom and force Adductors, abductors and both external and internal rotators fairly



strong As the patient stands, the kyphosis in the cervical region is very pronounced as is a compensatory lumbar lordosis The abdomen is prominent, the shoulders are decidedly round and the chin is held to sternum

There is considerable wasting of both thenar and hypothenar eminences of hands Slight wasting of forearms and in the regions most atrophied, fibrillary contractions are frequent Triceps and forearm reflexes exaggerated con- siderably Very marked periosteal reflexes Abdominal, pectoral and gluteal reflexes very marked Enormously tetanic patellar reflexes No ankle clonus Knee hip and ankle joints spastic Marked cremasteric reflexes Exter- nal genitalia negative No ataxia Marked girdle sensation across epigastrium

Sensation muscular sense perfect throughout body. Tactile sense normal everywhere save just beneath clavicles and on sides of shoulder, where complete anesthesia exists Sense of cold and heat correspond fairly well, although appreciation of heat is less preserved than that of cold The photographs fully indicate to what extent the thermo anesthesia obtains *All of the neck, part of face* near the angles of the inferior maxillæ, the chest above the nipples, a small plaque in the right hypochondrium, the extensor surfaces of both arms and fore arms, the flexor surface of the right fore arm, the finger tips to a slight degree and the antero external surface of the right thigh are the areas affected Corresponding very accurately with areas of thermo-anesthesia above outlined we find an absence of sense of pain The skin areas in which analgesia and thermo anesthesia are found are, however, acutely alive to tactile impressions

In the case presented, the main interest centers in the diagnosis, since prognosis and treatment depend logically and chronologically upon the accuracy of the diagnosis Grouping the symptoms, it is found that they fall under four main heads Those referable 1, to the pons, 2, to the cervical enlargement of the cord, 3, the lumbar enlargement, 4, to the spinal deformity

The symptoms referable to the cervical enlargement of the cord are so characteristic that from them the diagnosis of syringomyelia can be made, and with them all other symptoms and signs can be harmonized The muscular weakness and atrophy, especially of the muscles of the shoulder and of the small muscles of the hand, the fibrillary contractions and increased reflexors (wrist clonus) are characteristic of syringomyelia, when accompanied by sensory phenomena—partial or "disassociated" anesthesia The photographs indicate the sensory disturbance as dark areas, produced by painting the skin with iodin Over the dark areas there is an anesthesia to heat and cold and to pain Heat and cold anesthesia in syringomelia do not always exactly correspond, and in this case there are numerous very circumscript areas on the border of the stained area where heat sensation is present and cold is absent and *vice versa* The dark plaques represent areas where anesthesia to both heat and cold prevails Tactile sensation and muscular sense are present everywhere except where tactile sense is impaired over small areas on the neck and chest They are found even where thermo anesthesia and analgesia exist

In most instances the arm symptoms are the main findings In the present case there is a small area (indicated in the illustration) in the right hypochondrium where thermo-anesthesia and analgesia are found Also upon the antero-lateral surface of the right thigh, extending from the anterior superior spine of the ilium to the patella, is an extensive area over which the same partial anesthesia is present

A fourth complexus of symptoms relates to the basal nuclei of the last of the cerebro-spinal nerves The dysarthria and dysphagia are due to a gliomatosis in the medulla Bulbar symptoms are not rare in syringomyelia [50, 51, 52] Disturbances in deglutition are frequent (Leyden, Schultze, Westphal) Nausea and vomiting, due to irritation of the nucleus of the glossopharyngeal, occur as well as tinnitus aurium, vertigo, singultus, polyuria, amaurosis, amblyopia, unequal pupils, nystagmus Facial paralysis is rather rare (Westphal, Schultze, Grasset, Starr, Chabanne, Raïchline [62]) Paralysis of one vocal chord, of the tongue, of the ocular muscles and of the fifth nerve are recorded Disturbances in the circulatory and respiratory mechanisms occur

Multiple anatomic foci, which must be assumed to explain the separate groups of symptoms, occur in syringomyelia, either as separate deposits of gliomatous tissue or continuous gliomatous degeneration through the entire length of the cord This anatomic fact explains every symptom in the case, if we can account for the spinal deformity

A conspicuous physical sign in examination is the spinal deformity The cervical kyphosis led several examining surgeons to diagnose tubercular spondylitis and recommend suspension The difference between the two diagnoses, spondylitis and syringomyelia, in prognostic and therapeutic import is obvious The subject of arthropathy in syringomyelia has attracted but little attention

In syringomyelia, simple, painless, intermittent, obstinate hydrarthoses are observed They resemble the analogous disturbances of tabes, occur chiefly in the arms and may result in epiphyseolysis

With the preceding statement the subject of joint or bone alteration in syringomyelia is usually dismissed The most exhaustive study of the affection is that of Sokoloff [2], who collected twenty cases and described three of his own Graf added thirteen instances and Klemm reported two instances, so that some thirty six reports exist [1-3]

While considerable attention has been devoted to changes in other joints, not much has been written with reference to spinal alterations Scoliosis is frequently observed Broca [44], Morvan [4], Bernhardt [41], Roth (60 per cent, Morvan and Bruhl, *Bernhardt sixteen times in eighteen cases*, Roth five times in eight cases) Scoliosis corresponds in location to the earliest and most advanced intra medullary changes [4] Kyphosis is more rare Scoliosis and kyphosis may be explained *neuro trophic* (Kroenig) or as due to muscular weakness (Roth) Lordosis is rare In the side view of photograph of our case, the kyphosis is explained by the action of the thoracic muscles antagonistic to the posterior muscles of the shoulder girdle, second by the action of gravity, and third by trophic changes Comparison of the spinal arthropathies with those in other joints is appropriate in order to determine possible points of similarity

Sokoloff believes more joint lesions will be found in syringomyelia when greater knowledge and more common recognition of the disease prevails

In analyzing the symptoms of gliomatous arthropathies, we consider several criteria by which their existence is established

1 *Latency*—The joint affection is often overlooked by the patient or the lesion is first noted by the examining physician, who rarely can tell when the affection began

2 *Fluid in Joint*—Again, in marked contrast to tabes, the arthropathy of syringomyelia seldom produces those marked exudations which at once attract the attention of the tabetic patient Klemm [7] admits that fluid plays a subordinate rôle in syringomyelia joints, while they constitute an important factor in tabes In exceptional cases of syringomyelia, acute exudation may be observed in the joints and para-articular connective tissue, but it is usually transitory, unnoticed by patients and rarely marked in degree

Klemm has stated that fluid is more frequent in neuropathic joints than in ordinary arthritis deformans, in which exudation is comparatively rare or, if present, never so copious Even in some cases of arthritis deformans of neuropathic origin the process runs without effusion The rapidity of the secretion, its greater extent, and the invasion by the fluid of the para-articular tissues, differentiates neuropathic joints from arthritis deformans Accurate differentiation from arthritis deformans is not superfluous, as joint alteration occurring in syringomyelia may be non-exudative, the arthrite sèche of French writers Krauss [37] and Thiersch [25] recorded cases in which the primarily incorrect diagnosis of arthritis deformans was finally changed to arthropathia gliomatosa In syringomyelic and tabetic arthropathies, however, intra- and extra-articular exudation plays a prominent part

3 *Pain*—Arthritis deformans is excessively painful, while *there is no pain in neuropathic joints* A case is related[21] in which a patient painlessly opened a joint with a pair of scissors, and two cases are recorded (Czerny and Sokoloff) where the joints were resected without anesthesia This complete *or relative analgesia is* an important diagnostic datum for tabetic and syringomyelic joints Spontaneous painless fractures (three cases) and luxations also occur

4 *Extra articular bony Deposits*—It is characteristic of neuropathic arthropathies that para-articular changes occur, expressed as ossification in the soft and bony structures near the joints as well as exostoses at some distance from the articulations In syringomyelic and tabetic joints, osteophytes *are observed* external to the joint capsule in the muscles, tendons and fasciæ, while they are intracapsular in arthritis deformans—a most important and characteristic difference, according to Volkmann Rotter believes that nodes occur *only in* the lower extremities after fracture, from separation of small particles of bone Klemm combats this view and asserts that in the absence of history of joint trauma, extra-articular growths are highly characteristic of neuropathic *joint* disease *Previous* change in the soft parts probably favors osseous deposit (atrophia muscularis lipomatosa pseudo hypertrophica of Sokoloff and stretching with thickening of the joint capsule, favoring luxation)

5 *Prognosis*—Sokoloff believes that the prognosis in gliomatous joints is not always unfavorable, but rather the reverse, consisting in a subluxation alone, stretching of the capsule or an inconspicuous cartilaginous erosion, which may exist for years without progression

6 *Influence of Trauma*—Sokoloff, the most exhaustive writer on the subject, lays much stress upon trauma, emphasizing the following points *that* syringomyelia occurs in the laboring classes, that it may be easily overlooked on account of the analgesia present, and that trauma is an

important factor in tabetic arthropathy Virchow, Rotter and v Volkmann believe that trauma is always the cause[30] and that tabes is only a predisposing factor Sonnenburg's *conception*[35] is that the mechanical theory is not sufficient, that tabetic arthropathies stand in a very *intimate*, if indeed not wholly investigated, relation to tabes, and that *trauma may* produce joint disease, protract and modify its course

7 *Localization* —Rotter found 18 per cent of tabetic arthropathies in the upper and 80 per cent in the lower extremities Syringomyelic changes almost always occur in the upper extremities, a fact which can be used in differential diagnosis The pathologic changes are in the upper extremities identical in the two affections In the lower extremities, syringomyelic arthropathies occur so rarely as to prevent comparison

8 *Motility* —The joints are very movable in syringomyelia, contrasting sharply with the rigid articulations of arthritis deformans

9 *Age* —Syringomyelia occurs usually in the young, while arthritis deformans is a senile or adult disease

10 *Course* —Regarding chronicity, the gliomatous arthropathies present more chronic clinical history, in this respect resembling arthritis deformans Syringomyelia has run as protracted a course as forty-three years (*Marwedel*[29]), *thirty-six* years (Gilles de la Tourette), forty years (Déjérine)

11 *Pathology* —Anatomic differences between tabetic and gliomatous arthropathies do not exist, although local findings, either post-mortem or operative are rare The pathologic changes vary greatly, there being dropsy in some parts and hypertrophy in others Most frequently the two forms co-exist The initial change is usually degeneration in the superficial parts of the articular cartilages (Virchow and v Volkmann), while the deeper parts hypertrophy and ossify The synovial membrane thickens, relaxes and is the seat of villous growths and osseous deposits The bones are not proved to be friable, as in tabes

Regarding the pathogenesis, some writers consider the arthropathies due to trophic disturbance, since they occur with acromegaly (Karg, Charcot,[30-34], [46], [47]) and with hydrorrhachis and spina bifida[48 49]

12 *Diagnosis* —Joint affections in the upper extremities pursuing a *chronic* course without inflammatory manifestations, *producing* spontaneous dislocations, speak for gliomatous arthropathy, especially when there is joint deformity, a disproportion between the change of form and any inflammatory *symptoms* (should any exist), flail joint, crepitation and relative or complete painlessness

A cutaneous dystrophy, scars of burns, vestiges of pararitia, *muscular* atrophy in peripheral parts of the upper extremities, "disassociated" anesthesia, especially thermo-anesthesia, speak *for* syringomyelia

13 *Treatment* —Resection and immobilization have been practiced Drainage for adventitious secondary infection is sometimes indicated The therapy in other directions is that of the disease itself, *expectant and symptomatic*

2818 Indiana Avenue, Chicago

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DR HUGH T PATRICK showed some microscopic preparations from cases of syringomyelia With regard to these preparations, Dr Patrick made the following *remarks* I have set up for your inspection about twenty slides, taken from five different cases of syringomyelia, and I have selected those which seem to illustrate the various conditions found in this disease The specimens speak for themselves, and I wish to mention only one or two points in connection with the pathology The first point which the specimens illustrate very well is that in the great majority of cases the process does *not originate*, as is generally supposed, in the central canal You will see in many of these specimens directly *in* front of an enormous syringomyelic cavity, the central canal perfectly normal, or simply distorted by the *pressure and* displacing influence of the pathologic process *In one* slide it can be seen that this syringomyelic *cavity has* at last invaded the central canal, and the anterior part of the cavity is lined with perfectly normal epithelium which belongs to the central canal, but has *taken* no part whatever in the pathologic *process (in the cavity formation)*

The origin in these cases seems to be in the embryonal tissues which lie just posterior to the central *canal* and which constitute the remains of the fissure *made* by the *closing* up of the spinal groove

Another point which the sections well illustrate is, *that* the various and seemingly anomalous symptoms of syringomyelia are dependent upon the varying location and size of the *central* spinal lesion *It will be seen that in* some instances the cavity invades particularly *one* sometimes both anterior horns, is sometimes almost *completely* limited to the exact center of the cord, and in *one* case affects one posterior horn exclusively In some instances again, *the cavity* has extended into the lateral *columns*, *in some cases there* is descending degeneration of the pyramidal tracts, and in others not The process is generally supposed *to consist* of a gliosis of the cord, but in some cases it is scarcely to be distinguished from a diffuse gliomatosis Two of *the sections* show this excellently well, and it is astonishing *to what* a degree the entire cord has been infiltrated and the normal tissue destroyed In this case too, the process has invaded the membranes, which are *enormously* thickened Clinically, this case passed for many years as *one* of *hysteria* One section the one in which one posterior horn alone is affected, shows the rare condition of syringomyelia limited to the lumbar region

I *also* show you sections of hydromyelus and of syphilis of the cord, either of which may closely simulate the condition of syringomyelia I would call your attention, too, to the sections showing an artificial *post-mortem* cavity in one anterior horn which so closely resembles syringomyelia that the sections were demonstrated as such by a neurologist of international reputation

DISCUSSION

THE PRESIDENT—Just a word in reference to the joint trouble or deformity in these cases of syringomyelia The *most recent* studies I *have found* on the subject of joint diseases in connection with gliosis and tabes are published in the *Deutsche Zeitschrift fur Chirurgie* by Klemm, and his conclusions are that these arthrodes found in these two diseases are of the same nature pathologically and anatomically as those which we find in arthritis deformans He finds no difference at all Probably, etiologically, great differences will be found when further *investigations* have been made on the subject

DR SANGER BROWN—I would like to ask Dr Edwards if suspension or extension has been tried in order to reduce the deformity of the neck?

DR EDWARDS—The patient has never been suspended

DR BROWN—You do not know how far it might be reduced if suspension or extension was tried

DR EDWARDS—So far as manual strength goes, you *can* not make much difference

DR BROWN—I feel thankful to Dr Edwards and Dr Patrick for allowing me to see the case and specimens I had the privilege of seeing the case before in the Cook County Hospital But I think it is a rare treat to see such a large number and variety of specimens of this rare form of disease and so far as the specimens go, they leave nothing to be desired If we had been able to have a history of each case it would simply have been a lesson in the practical physiology of the spinal cord, and I may say that a lesson in the practical physiology of the spinal cord is not so clear and definite as it was two or three years ago, that is to say, recent and more careful experiments upon the lower animals have demonstrated that the views established in reference to the sensory functions of the spinal cord are not as we have been taught for the last ten or fifteen years It has been ascertained that some of the degenerations which have formerly been regarded as dangerous in the sensory tracts were the result of clumsy and careless operations, and enough has been determined to show that our ideas hitherto held in regard to the spinal cord were not altogether sound Enough advancement has not been made to warrant us in stating at the present time just what changes we will have to make in our physiology But, as has already been stated, and as explained from these excellent sections the symptoms of syringomyelia are extremely various I asked Dr Edwards a question in reference to the deformity of the neck in his patient, simply because it occurred to me that it is quite possible that the deformity in that case was caused by a lesion affecting the muscles which support the head and as many of these muscles are rather deeply situated and might atrophy to a considerable extent without the atrophy being very appreciable to external observation, it occurred to me that the deformity might be due largely to such atrophy I can not conceive how any deformity having occurred in that situation at the outset could produce the symptoms, because the pathologic process, whatever it might be, would have to be external to the cord, and the first symptoms would have been those of compression if the disease had begun there, and it is incredible to suppose that the disease began in the cord and spread to these parts I think, to assume that the deformity in the bones of the neck were trophic is hardly feasible, inasmuch as, if they are due to trophic changes, these are the only ones In syringomyelia several types have been readily recognized and marked out, that is, a type without any material trophic manifestations, and a type in which trophic manifestations are strongly marked The latter is the type in which we have the trophic changes within the fingers, especially in the nails of both the hands and feet, and all the symptoms taking place in the bones Cases are recorded in which enlargement of the bones of the hands and of the tissues of the hands have occurred which were similar to and suggestive of acromegaly, but they probably were not the same disease

Dr Patrick spoke of the pathologic lesion as being invariably a gliosis, and I believe that in most of the cases undoubtedly the condition was a gliosis, but when this matter was up for discussion, if I remember rightly, at the last International Medical Congress held at Rome, a case was reported there in which the pathologic findings were those of leprosy, that is the bacillus of leprosy was found in the cord, there being a proliferation of tissue about the bacillus which constituted the pathologic lesion, and in the discussion it was generally conceded that syringomyelia was not at all synonymous pathologically with gliosis Any pathologic process of a progressive nature which involves and destroys these tissues in the central part of the cord will produce the symptoms, and contrary to what had hitherto been supposed, there are cases in which the leprosy bacillus is found as a cause of the pathologic process The symptoms of syringomyelia and those of leprosy have been placed side by side on account of the peculiar anesthesiæ, and the diseases have been thought of in the same connection Dr Patrick drew our attention to the fact that the disease does not begin, as we were formerly taught, in the central canal but outside of it, in the epithelial structures of which the central canal is composed In the process of closure, portions of these structures are pinched off on each side and are placed in the posterior horns

Dr Harold N Moyer—I feel there is an apology due the society for not presenting my case of anesthetic leprosy tonight I had a man looking for the patient this afternoon, and could not get him He objected to being exhibited and has grave suspicions of his trouble

I can not help referring to a few interesting analogies between the case referred to by Dr Edwards and my case of leprosy The young man first came to the clinic at Rush Medical College, for nervous diseases, and I demonstrated his case as one of syringomyelia In a subsequent conversation with Dr Patrick, he suggested leprosy to me The young man returned and I again discussed the analogy between these two affections, but neglected to ask the young man where he lived, or where he was born, but after he left the college and was walking down the street he informed me that he was born in Australia, and when 4 years of age he was taken to the Sandwich Islands and lived there a year Of course, that made the probable exposure to leprosy imminent

Regarding the symptoms, they are almost identical with the case which you have seen demonstrated tonight The anesthesia, however, extending up the limbs, on one arm to near the shoulder, the other arm to just above the elbow, on both legs to the middle of the thigh There is absolute loss of pain sense, but pressure and muscular and some degree of tactile sense remain There is also the same claw position of the hands The patient can not extend the fingers There is not the regularity of anesthesia about the shoulders such as we have here, but there are irregular patches on the side of the abdomen, chest, shoulders and on the back, more or less circular in outline, presenting at their periphery slight discoloration of the skin, which is not raised, and the cuticle is not abraded in any way We simply note in the area surrounding the anesthetic patches that the cuticle is somewhat darkened In the anesthetic portions, the skin is lighter than normal, and the anesthesia in these patches presents the same characteristics as that upon the extremities, namely, loss of temperature and pain sense, but the tactile, muscular and pressure sense is retained, although impaired

There is the same increase in the reflexes which we have here Aside from these symptoms, I think there are no differences to be noted The relation between the two diseases as pointed out at the International Medical Congress, may throw additional light upon this subject It is an interesting fact that most cases of syringomyelia have been reported by French writers and they have largely come from certain sections of France in which leprosy was exceedingly rife during the Middle Ages

Dr Hugh T Patrick—The deformities that occur in syringomyelia, especially in the type of Morvan, bring up the interesting question regarding the relation of syringomyelia to Morvan's disease I suppose most of the members know that twenty cases of Morvan's disease were described in a territory with a population of only 50,000 One of the arguments used by those who would separate it from syringomyelia was that an equal number of cases of syringomyelia had not been found, representing an equal population in other words that syringomyelia is much more rare This argument and one or two others of minor importance are about the only ones which still seem to indicate the difference of these two diseases Post mortem examinations point to their being the same disease I have seen two cases described as Morvan's disease, and I have photographs of such a case which I believe must be syringomyelia The case was seen some years ago by Dr Church and myself He had the photographs taken and I am indebted to him for them At that time, we discussed the question whether it was a case of Morvan's disease, or whether it could not be regarded as one of syringomyelia Dr Moyer in the discussion at that time said that an autopsy had recently been made in which the lesions of syringomyelia and Morvan's disease had been found, and that it was therefore, without doubt, the same disease This case manifested trophic trouble in the hands and scoliosis That leads to the question upon which Dr Brown has spoken, namely, that there may be different types of this disease, and that the different locations of the lesion will generally account for the difference in symptoms The trophic troubles begin sometimes in the soft parts, sometimes in the skin and muscles, and at other times in the bones They may begin in the upper or lower extremities The process usually starts in the cervical enlargement, so that the upper extremity is first invaded A case is reported in which it began in the lumbar region The trophic disturbance began in the toes in one case and it simulated tabes Cases are reported also where post-mortem examination has shown a combination of syringomyelia and tabes Then again, the location of the process determines the area in which the symptoms appear Sometimes the analgesia is first to appear Generally there is no anesthesia, but there may be Sometimes the trophic trouble begins in the soft parts, and then again in the bones, sometimes the soft parts are not involved at all, and the same may be said of the bones It depends a good deal upon the location of the lesion

With regard to those cases in which the bacillus of leprosy was found, I do not lend any support to that view There are only two men of note who support it, and the evidence is not sufficient from their contributions on the subject

As to whether syringomyelia in different cases may not be really a different disease, a gliosis, a central myelitis, or something else, I think such a view should be discountenanced at the present time In the majority of cases it has been shown to be a gliosis, and the symptom complex is sufficiently well known to form a distinct type of disease and the name should be limited to such Of course, the same symptoms may be produced by central myelitis I have seen one case in which an injury was followed by a central hemorrhage in the cord The case progressed slowly What the process was in that case I do not know I do not imagine in that case that there was gliosis at all It was wrongly called a case of syringomyelia A central tumor of the cord may cause the same symptoms as syringomyelia The tumor may be softened secondarily in the center, make a cavity, but I do not think it should be called syringomyelia I have seen cases of acute central myelitis with interference with pain sense with all the symptoms of acute syringomyelia, such a diagnosis being made post-mortem A few months ago Cantaninni, an Italian, publisned some cases which show the disease to be family in type A mother and three children were all affected with syringomyelia, and one of the conclusions that he draws is that in all cases of syringomyelia it is only a matter of location I do not think that is the proper and logical view to be adopted at the present time, that whenever the disease process is located in the central part of the cord, prodncing the symptoms of the disease, therefore it should be called that disease I do not think that is the proper thing to do, because the process is now sufficiently well known Other diseases produce the same symptoms as typhoid fever, but we do not call them typhoid fever

With regard to leprosy, in a given case of this disease it may be difficult to distinguish it positively from a case of syringomyelia, but such a difficulty is rare In most cases the diagnosis can be made without an examination for the leprous bacillus In the first place, the trophic trouble in leprosy affects by preference the skin, and the subcutaneous tissues, the muscles secondarily, and the bones the last of all When the phalanges are affected, they are not affected in the same way as in syringomyelia In the latter disease if the phalanges are affected, as the thumb, there is suppuration and necrosis with casting off of bone The patients many times pull out pieces of necrosed bone In leprosy there is a great deal of atrophy without suppuration In syringomyelia there are frequently secretory and vasomotor disturbances The function of the secretory glands may be affected That is rare in leprosy The skin trouble which is present in leprosy is rare in syringomyelia There are pustules in the latter disease, but no skin eruption The only skin eruption so-called in syringomyelia is a spurious urticaria from scratching caused by irritation In syringomyelia, we frequently have symptoms referable to the eye muscles, or a reflex action of the iris, or some nervous affection of the eyes There is a difference in the pupils, one pupil does not react to light as well as the other These things do not occur in leprosy In the latter disease we have only a superficial trouble of the eye, which does not occur in syringomyelia Furthermore, the anesthesia in leprosy differs from that of syringomyelia In the former disease the anesthesia is due to a multiple neuritis and it affects most intensely the periphery of the extremity and gradually approaches the trunk, in other words, the multiple neuritis, as Dr Moyer said, is along the lower extremities and extends from the feet up to the middle of the thigh That is not apt to occur in syringomyelia In syringomyelia, the anesthesia corresponds to the spinal segment If in the cervical region, it corresponds to the distribution conforming to it The anesthesia of which Dr Moyer speaks does occur in syringomyelia, but it is very rare These are the principal points in the differential diagnosis between the two diseases Ordinarily the difficulty is not very great

(*To be continued*)

SELECTIONS

Cultivation of the Gonococcus of Neisser —Redner lately exhibited a series of twenty-four hour gonococci cultures from acute and chronic gonorrhea The culture medium contained 3½ per cent agar, 5 per cent peptone, 2 per cent glycerin, 5 per cent common salt Reaction neutral The gonococci thrive well in this, and the excessive growth often seen seldom occurs He called attention to the sensitiveness of the gonococcus to fluctuations of temperature In his mind, the varying opinions of writers with regard to the applicability of Gram's method of staining to the gonococcus is due to the use of solutions of different strength, also to variations in the length of the staining and decolorizing processes Others beside Redner have noticed that if the gonococcus is overstained by standing several minutes in the concentrated anilin-water-gentian-violet solution, fifteen seconds in alcohol will decolorize, while all other diplococci, after overstaining, retain their color longer For contrast staining it is recommended to use very weak solutions, for instance, 3 drops of concentrated alkalin solution of fuchsin to 30 to 40 c c of water, applied for forty-five seconds Lewin has often cultivated the gonococcus on urine agar very successfully Varying results may depend upon the reaction of the urine Good cultures were also obtained with urine containing sandal-wood, so that the efficacy of sandal-wood against gonorrhea appears very doubtful —*Wiener Klinische Rundschau*, July 14, 1895

Mechanical Treatment of Pleurisy in St Petersburg —The movements, according to the directions of Ling and Hartelius, consist in quick elevation of the thorax of the sitting patient, twisting and bending of the trunk in various directions, with changing positions of the arms and fixation of the extremities In order to work upon the side containing the effusion, for instance the left, the movements are directed chiefly to the right, in such a way that inspiration occurs at a moment when the left side is most favorably situated to admit the air For respiratory exercises, the patient is placed on a sofa on the sound side, with a rather firm pillow, the corresponding hand remains under the pillow, the legs slightly flexed to relax the abdominal muscles, the head somewhat backward The arm of the affected side is raised up and back as far as possible In this way the sound side is in the position of expiration, pressed upon the pillow by the weight of the body, and its movements are lessened, while the affected side is in a favorable position for respiration The position of the head and arms contributes to the elevation of the ribs and so affords the auxiliary muscles of respiration the possibility of developing greater power The patient remains in this position some time, while he takes 16–20 inspirations a minute with closed mouth Meanwhile the physician massages the intercostal muscles —*Therapeutische Wochenschrift*, July 21, 1895

Union by First Intention in Nerves —Gluck presented before the Berlin Medical Society the case of a child of a year and a half, operated on May 7, 1895, for extensive tuberculosis in the right radius In the operation the radial nerve was severed After careful disinfection the nerve was sutured and then the external wound closed Primary union of the wound resulted After fourteen days, the first symptoms of restoration of the nerve were shown and after about four weeks the functions of the muscles supplied by the radial nerve became normal This is the first instance of primary union in human nerves Experimental investigations on animals show that after such nerve suturing a portion of the nerve filaments retain their vitality —*Deutsche Medicinische Wochenschrift* July 4, 1895

Pernicious Anemia.—At the Berlin Medical Society, Senator recently exhibited a microscopic blood preparation from a case of pernicious anemia, which showed very clearly those peculiar reddish corpuscles, possessing amœboid movements, which Perels denoted as characteristic of pernicious anemia Senator also found them frequently in similar cases, yet he regards it as doubtful whether they are characteristic, since he observed them in one case which could not be so diagnosed —*Wiener Klinische Rundschau*, July 14, 1895

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SATURDAY OCTOBER 5, 1895

LOUIS PASTEUR

And the King said unto his servants, Know ye not that there is a Prince and a great man fallen this day in Israel?"

Louis Pasteur, the distinguished chemist, who has contributed so largely to the scientific standing of the French Academy, died of paralysis at his home in Paris September 28, in his seventy-third year

For a period of half a century his researches and achievements have commanded the attention of the scientific world and his death will be viewed not as a loss to France alone, but as a universal calamity His career is characterized by indomitable energy, and his successes have been due to his earnest application and strict adherence to a single line of research, easily traced from his first discovery, that relating to crystallography, to those of later days Louis Pasteur, like most scientists, was often assailed by unbelievers, but guided by mathematical precision and armed with the arguments supplied by careful research, he lived to see his important theories accepted by those who were formerly most active in their denunciation So invincible did his theories prove that his colleagues became somewhat chary of taking exception to his statements, and on one occasion it is said that when a member of the Faculte de Medecine announced his intention of proving the fallacy of one of his arguments, a member of the Academy of Sciences called him aside, saying "*Beware! Pasteur is always right* "

His discoveries were those of great principles, and hosts of scientific workers were given their cue by some general principle enunciated by him, which when followed into its legitimate ramifications, seemed almost to become a new creation Thus Tyndall followed, when he demonstrated the aerial currents of bacteria Thus Lister followed, when he formulated the antiseptic plans of wound treatment, and others have walked in the rays of the same radiant light when they went a step beyond Lister, and created *aseptic* surgery

The industry, the modesty, the perseverance, and scarcely less the intense patriotism of this wonderful man, must commend his memory to posterity, by whom he will be appreciated for these characteristics almost as much as for his science

The editor of this Journal, as he writes, recalls the appearance of Pasteur as he appeared in 1890 in his laboratory, in the famous Institute erected during his lifetime as a perpetual monument to his greatness

A man of delicate frame, advanced in years, wearing a skull cap, with well cut gray beard, plainly dressed and modest in his demeanor A thoroughly pre-occupied student, was our thought, as we approached him In the pleasant interview which followed, Pasteur was informed that the first steamer built by the United States Government for the Quarantine Service was named the "Louis Pasteur " He simply expressed his thanks and bowed politely Continuing the conversation, he was told that the second steamer for the United States Quarantine Service was named the "Robert Koch " He became animated and said with much fervor "*C'est bien fait* " He evidently had great admiration for his German contemporary, there was not a tinge of jealousy "May I ask " said Pasteur, "what names you have chosen for the remainder of your quarantine fleet, as I understand from you that there are three more contemplated?" "We shall honor our own countrymen next," he was told "The third and fourth vessels will be named respectively the William H Welch and the George M Sternberg, the fifth is not yet named " "Again, well done," said Pasteur, with interest

A hurried walk with the savant and a friend through the laboratory and the museum ended this visit which, to the editor, will always be a fragrant memory and one of the pleasurable events of a lifetime

Louis Pasteur was born in the Department of Jura, Dec 22, 1822 His early education was received in the College of Arbois, from whence he entered Bensançon where he received the degree of *bachelier ès lettres*, and was appointed tutor in the same college In the intervals of his duties he followed the course of mathematics necessary to prepare him for the scientific examinations, at the École Normale In October, 1843, he entered the institution, passing fourth on the list of candidates for admission, and received his doctor's degree in 1847 He taught the physical sciences at Dijon from 1848 to 1849, and chemistry at Strasbourg until 1854 In 1857 he returned to Paris and took charge of scientific instruction in the École Normale, where he remained until 1863, at which time he became professor of geology, physics and chemistry in the School of Fine Arts. He was appointed professor of chemistry at the Sorbonne in 1867 and remained in that position until 1875. In 1868 he was retired with a pension. From 1886 most of his work was at the Pasteur Institute.

His first triumph was in crystallography when he discovered the "left-handed" tartaric acid and the constitution of paratartaric acid. For his researches on the relations of the polarization of light to hemihedrals in crystal he received the Rumford medal from the Royal Society of London. His next achievement was the theory of fermentation and was followed by a series of studies on the manufacture of vinegar and studies on wine. In 1865, at the request of the civil authorities, he directed his investigations to the diseases of silk worms, which were ruining that great industry in France. For three years he was actively engaged in the study of this disease, and when he had arrived at a solution of the problem, which was to the effect that all unhealthy moths should be rejected and destroyed in order to prevent infection, he was stricken with paralysis, from which he never fully recovered. In 1860 he exploded the theory of spontaneous generation at the Academy of Sciences. He next took up the problem of splenic fever, from which he passed to fowl cholera, at the same time directing his attention to Jenner's discovery of vaccination. He communicated to the Academy of Sciences the important facts that sheep and cows vaccinated with the attenuated bacilli were protected from subsequent inoculation with virulent virus.

Of these remarkable discoveries Pasteur said: "I have lent to the expression vaccination, an extension that I hope science will consecrate as a homage to the merit and immense services rendered to humanity by one of the greatest men of England—Jenner."

His next great work was on hydrophobia, and his first case was upon a boy named John Meister. His theories on this subject have continued to gain credence and are now accepted by the majority of scientists. His discoveries in relation to chicken cholera clearly forestalled the antitoxin hypotheses in treatment.

In 1887 the Institute Pasteur was built by public subscription and the average number of inoculations has been nearly one hundred a day.

In 1892 the municipal council of Dôle placed a commemorative tablet over the door of the house in which he was born.

ON THE INFECTIVITY OF THE URINE IN TYPHOID FEVER

Two professors of the British Army Medical School at Netley make a joint contribution to the London *Lancet* touching the important rôle played by the typhoid bacillus in the urine of patients suffering from typhoid fever. Their names and positions are A. E. Wright, professor of pathology, and D. Semple, Surgeon-Major, assistant to professor of pathology.

Their examinations for the article in question were seven in number, the most approved methods of bacterial investigation being employed by them. In six of the cases the bacillus was readily detected in the urine, and this fact, they claim, should bring into greater prominence the diagnostic value of bacterial work in doubtful cases of fever. The writers are free to admit that the presence of typhoid bacilli in the urine is not a new fact. It has heretofore been pointed out by Sanerelli, working under the auspices of Metschnikoff, and by them made the basis of a new theory, namely, the theory of blood infection in contradistinction to the intestinal intoxication process theory, which is the one that is now generally worked under by the profession. Their line of argument begins with the parity of pathologic processes that takes into consideration the conditions of organs remote from the intestinal tract, in the case of this fever, as compared with certain other febrile diseases. One of the phenomena first to be explained, they assert, is turgidity of the spleen and the presence of typhoid bacilli in the splenic tissue.

"Now, this turgidity of the spleen and this presence of microorganisms in the splenic tissue is an invariable accompaniment of every septicemic process. We find it in the case of such blood infections as anthrax in cattle and spirillum fever and malaria in man. And we have the explanation of this phenomenon in the experiments of Werigo, which show that the introduction of any foreign particulate matter into the blood invariably results in a deposition of that particulate matter in the spleen (and other internal organs), and in an aggregation of polynuclear white blood corpuscles round the foreign particulate matter, and finally, in a process of phagocytosis. Everybody who has a rabbit, and a little carmine, or any bacterial culture at his disposal, can readily verify these facts for himself. The enlarged spleen and the presence of bacteria there are thus quite in harmony with the theory of a blood infection in typhoid fever. The fact that the white blood corpuscles are diminished in the circulating blood in typhoid fever is also in harmony with this explanation. We have further, in connection with typhoid fever, to account for the eruption of pink spots on the skin. These were inexplicable on the intoxication theory of typhoid fever. They are, however, of the easiest explanation if we make the assumption that typhoid fever is characterized by a blood infection, for here, as in other cases, we may instance the skin eruption in the case of human glanders, the spots evidently corresponding to lodgments of the bacteria in the capillaries of the skin. This interpretation of the skin eruption in typhoid fever has been borne out in the case of typhoid, just as it has in the case of glanders, by the fact that the specific bacteria have been cultivated from the spots."

The writers quote the findings of Wathelet in his series of investigation of the stools of typhoid patients.

His object was to answer the question as to whether, in addition to the bacillus coli communis, the true typhoid fever bacillus is not also to be found in the stools of patients suffering from typhoid fever The following are the results of WATHFLET's careful examination of this question The true typhoid fever bacillus was detected in the stools of only four of the twelve cases of typhoid fever which were studied by this observer In the case of these four patients the typhoid fever bacillus was detected only four times in a total of twenty-four examinations, and even on these four occasions the true typhoid fever bacillus was outnumbered by the bacillus coli communis in the proportion of about 3 to 1 In the case of the other eight cases of typhoid fever the bacillus appeared to be absent from the stools throughout the whole course of the disease WATHFLET has further shown that if the bacillus typhosus and the bacillus coli communis are implanted into one and the same tube of nutrient broth, the bacillus coli communis will outgrow and kill off the typhoid fever bacillus, even when at the outset an enormous numerical preponderance is given to the typhoid bacillus over the bacillus coli communis Again, WATHFLFT has shown that whereas the bacillus coli communis will flourish in a nutrient medium containing the toxins elaborated by the typhoid fever bacillus, the typhoid fever bacillus will not grow in a nutrient medium containing the toxins elaborated by the bacillus coli communis "

The conclusions of DRS WRIGHT and SEMPLE may be summarized under four principal heads namely

"1 It is true that the typhoid bacilli are present in the urine of patients suffering from typhoid fever, and if, as we shall see typhoid bacilli are generally absent from the feces, it will be evident that it is the urine, and not the feces, of patients suffering from typhoid fever which is responsible for the spread of typhoid infection

"2 If typhoid bacilli are constantly present in the urine of typhoid patients, it may be possible to diagnose the presence or absence of typhoid fever by undertaking a bacteriologic examination of the urine

"3 If it is true that typhoid bacilli are constantly present in the urine in cases of typhoid fever while they are generally absent from the feces, it will be evident that the conception of typhoid fever upon which the ordinary clinician proceeds is an entirely erroneous one

"4 The working hypothesis regarding this fever, in the minds of medical men generally favoring, as it does, the notion that this fever is an intestinal intoxication process should be revised, and substituted for it, one that will have regard to the wide range of pathologic appearances, some of which at least fit in well with a hypothesis of blood infection, such as malarial fever in man and anthrax in cattle "

The importance of thoroughly disinfecting the urine of typhoid patients rather than the feces is insisted upon, as the great hygienic lesson to be learned in this view of the case They say

"We thus see that in six out of seven cases examined, the typhoid fever bacilli were easily detected in the urine In view of this fact it seems to us that the bacteriologic examination of the urine ought not to be neglected in any doubtful case in which typhoid fever is suspected It is hardly necessary to do more than merely advert to the hygienic aspect of the matter It was only a natural outcome of the intestinal intoxication theory of typhoid fever that the greatest precaution should have been enjoined with regard to the stools of the patient suffering from typhoid fever while the disinfection of his urine was neglected If, however, the recent observations on the almost constant absence of typhoid fever bacilli from the stools are to be trusted, the disinfection of the feces will have to rank not as an article of faith, but as a mere "counsel of perfection " On the other hand, the most careful attention will have to be given to the disinfection of the urine In some cases the urine even before incubation is absolutely turbid with typhoid bacilli "

CONCERNING GALL-STONES

Gall-stones are a rather common phenomenon in the daily work of a physician with a large practice In fact, they are so common as to lull the vigilance of the unwary practitioner, and these notes are for the purpose of directing attention to some of the curious conditions connected with their presence, and to show that they are often an unmixed evil To begin, then, with their frequency It is commonly stated that from 4 to 12 per cent of individuals are affected with gall-stones This figure has been copied for many years and is probably too high PAULSEN, of Copenhagen, has recently published statistics showing that in Denmark this per cent is decidedly too high During the period 1870–1890, only 111 cases—30 men, 81 women—of cholelithiasis were treated in the Communal Hospital of Copenhagen During these years 9,172 necropsies were performed, and calculi were found in but 3 78 per cent

Mankind enjoys no monopoly of these concretions, for they are found in most vertebrates, especially in stall-fed oxen, and in mollusks and insects among the invertebrates As regards number, they may range from one up to hundreds and even thousands —7,802 seems to be the high-water mark thus far

The size of gall-stones ranges from mere detritus—*sable*, as they say in French—up to masses of several square inches It is given to but few persons to harbor a concretion measuring four and a half by two and a half inches, yet such a stone was recently removed from an old woman in England who otherwise was not at all remarkable Fresh calculi are always heavier than water and only float after becoming dry, hence, in washing fresh feces to discover them, they will be found at the bottom and not at the top of the vessel It may be noted that GERHARDT asserts lately that physical diagnosis of biliary calculi can be made, even before any pain is present, by this palpable tumor which disappears when the stone passes into the bowel The

CORRESPONDENCE:

Library of the American Medical Association

CHICAGO, Sept 25, 1895

To the Editor —For the first time in several years, if not in its history, this library has been united and roughly sorted into periodicals, transactions, monographs and pamphlets There are about two hundred and fifty incomplete sets of periodicals, mostly United States, with some English, French and a few German, Italian and Spanish Some of these, mostly the older United States periodicals, have been bound in a cheap but durable style, but the greater majority are unbound This number includes some not now received in exchange, but this deficiency is made up by new periodicals, so the number remains about the same

By the terms of the contract, the library does not receive *all* periodicals and books sent to the JOURNAL Some of these are kept for office copies and some become the property of the reviewers The value of these sets is their incompleteness, as enabling the Newberry Library to fill up many of the deficiencies in its sets, particularly of the United States periodicals, a procedure which has been anticipated for some time

There are some good things in the older United States periodicals, those now extinct For instance, there is almost a full set of the New York *Journal of Medicine*, sometimes called *Purple's Journal*, from the name of the most prominent editor This was in some sense the forerunner of the present *New York Medical Journal*

There is also a set, fairly complete, of the *Medical Repository*, edited by Samuel Latham Mitchell, a distinguished New York physician and United States Senator Started in 1797, this periodical turned the century and ran until 1824, to be practically succeeded by *Purple's Journal*, and this, later, by the present *New York Medical Journal*.

The *Philadelphia Journal of Medical and Physical Sciences* is nearly complete This is the direct antecedent of the *American Journal of the Medical Sciences* Strange as it may seem, the proverb of the shoemaker's child comes true in this library, for there is not a set or even a volume of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

The Canadian journals are well represented, as also are the Central and South American periodicals These latter are valuable as an exponent of what is being done in these countries which are so near to us, and which are opening such prosperous fields for commerce

There are also a few French and German periodicals About one hundred and thirty societies are represented by their Transactions, and in the majority of cases these Transactions as well as the periodicals are unbound

Nearly all of the State medical societies are here, and the various local and national societies also There are some valuable foreign Transactions, and these, as is well known, can only be secured by exchange With the State Transactions already in the Newberry Library, these will, in many cases, make complete sets The AMERICAN MEDICAL ASSOCIATION heads the list with a full set of its own Transactions and the Index

As to monographs or books, there are no especially rare or valuable works in the collection A few old English works have drifted in, and these will be noted

Heister, Lawrence Medical, Chirurgical and Anatomical Observations, vol ii, London, 1755, quarto This copy has lost both covers, and in addition the bands have been torn through It is a raised band book, and why the vandal should have spoiled it by tearing the bands out is a mystery

Astruc, John Treatise of Venereal Diseases in Nine Books London, 1754, quarto There are two copies of this work

Mead, Richard Medical Works, London, quarto, 1762 Has a fine portrait of the author as a frontispiece

Winslow, J B An Anatomical Exposition of the Structure of the Human Body, 3d edition, two volumes in one, London, 1769, quarto

There is an edition of Boerhaave in six volumes London, 1742–1746

Van Swieten Commentaries on Boerhaave's Aphorisms Eighteen volumes 1766–1776 This has the stamp and signature of Dr John Redman Coxe, a well-known Philadelphian, a man of note, a teacher, and editor of a dispensatory, who was born in 1773 and died in 1864

There are two sets of works of Benjamin Rush, easily the first man in United States medicine

There is an imperfect copy of the sixty volume, 1812–1822, Dictionnaire Encyclopedique

The bulk of the books are those received during the last fifty years and represent all branches of science There are comparatively few standard books among them The pamphlets are largely reprints, but there are scores of hospital reports, health reports and college catalogues The card catalogue and accession register, both of course imperfect and incomplete, are also here These show that an attempt was made to carry on the library as a library

The collection is now where it will do the most good, that is, in completing another and larger collection It never was a library, simply a mass of unorganized matter

Newberry Library G E WIRE, M D, Librarian

Tuberculous Patients—a Misquotation Corrected

ST LOUIS, Sept 27, 1895

To the Editor —In the JOURNAL of September 21 (in the report of the Society Proceedings), I am represented as having said at a discussion of the Mississippi Valley Medical Association, at Detroit, Mich, that tuberculosis patients could not live in Colorado or New Mexico, that they would be *more apt to die there quicker than anywhere else* I beg to say to you that I have never made such a remark anywhere, and that your reporter must have mistaken my statement I did say something to the following effect "That patients suffering with acute tuberculosis do not find *Colorado or New Mexico* climate favorable, and that in suc altitudes acute *tuberculosis runs* its *course* more rapidl than elsewhere at low altitudes" I had in mind simpl acute tuberculosis, and nothing else Please publish thi letter in a prominent place among the Society Proceeding *in order* that those to whom any injustice is done by th *misquotation may read it I remain,*

Very truly yours, PAUL PAQUIN, M D

A Correct Nomenclature

LA FAYETTE, IND, Sept 28, 1895

To the Editor —There is a growing tendency by physician to call their practice by the name of "business" While th practice of medicine has its business side, which should b carefully guarded, it surely is not all business, except wit those fellows who prostitute the practice to get out of it a the money they can, by leaving out of sight all the othe attributes which characterize a good physician's practic When a physician calls his practice "business," we naturall look for those tricks of trade which are reprehensible in th practice of medicine Often we do not have to look far find them either In the name of the good system und which we were reared, let us cease to lower ourselves in th estimation of others by calling what we do "business," b rather let it be known by the name by which it has alwa previously been called, "practice"

Fraternally, GEO F KEIPER, M D

BOOK NOTICES

Fuller on Male Sexual Disorders Disorders of the Sexual Organs in the Male By Eugene Fuller, M D, Instructor in Venereal and Genito-Urinary Diseases, New York Post Graduate Medical School In one very handsome *octavo volume of 238 pages with 25 engravings and 8 full-page plates* Cloth, $2 Philadelphia Lea Brothers & Co, Publishers 1895

This book contains seven chapters, as follows Anatomy, Physiology, Pathology, Clinical Features, Differential Diagnosis, Treatment and Prognosis, and Illustrative Instances

In this work the author correctly says that the anatomy, which lies at the foundation of all medical science, should properly precede any discussion of a subject, and proceeding therefrom, the physiology and pathology follow in logical sequence The book, which is a valuable one as far as it goes, seems to be devoted much more to diseases of the vesiculæ seminales than to any other affections, and, strictly speaking, its title should be sexual disturbances in the male with incidentally the anatomy, physiology and pathology of those diseases of *some* of the organs connected therewith For specialists the book will be an instructive one, and the latest illustrations giving all the operative methods for the treatment of vesiculitis will be very interesting The history and methods of incisions for operations on the vesiculæ seminales are given, but all those familiar with the literature of the subject, and especially with the work of Monod and Terrillon, on diseases of the testicle, published in Paris in 1889, will see that comparatively little on the general subject with the exception of the operative measures named, has been added The diseases of the testicle are hardly mentioned in the book, and then only *incidentally* We trust that should the work pass to a future addition, the author will change the name, or have it include the diseases of the testicle As a monogram on seminal vesiculitis, it is without doubt the most comprehensive of any

Hare's Text-Book of Practical Therapeutics A Text-Book of Practical Therapeutics, With Especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis By Hobart Amory Hare, M D Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia With special chapters by Drs G E de Schweinitz, Edward Martin and Barton C Hirst New (fifth) edition, thoroughly revised In one octavo volume of 740 pages Cloth, $3 75, leather, $4 75 Philadelphia Lea Brothers & Co, Publishers 1895

As this book has now passed to its fifth edition, it needs no special commendation on the part of the writer of this notice The revision has brought the book down to date Each article has been revised and the antitoxin treatment of diphtheria has been introduced The author mentions with approval that the 'gross percentage of mortality without taking favorable cases alone and including operative cases, ranges from 5 to 23 per cent as against the ordinary mortality of about 50 per cent The dose of the antitoxin serum is to be judged by its known strength and power, when conferring immunity, by the severity of the disease and the susceptibility of the patient The present common dose of the antitoxin serum of Behring and Parke, Davis & Co, is 5 to 10 cubic centimeters, while that of the strongest serum is much less One valuable feature of this book is the posologic table at the end, where doses of all the medicines are given in the metric system, as well as in the old British apothecary system

Some of the Physiologic Factors of the Neuroses of Childhood By B K Ratchford M D 8vo, pp 122 Cincinnati Robert Clarke Co 1895

This little book is a republication of a series of papers first published in the *Archives of Pediatrics*, and for the benefit of those of our readers who have not seen that publication we give the following general synopsis of the contents Chapter I, normal Function of Nerve Cells, II Physiologic Peculiarities of the Nervous System of Infancy from Childhood, III, Fever and Variable Temperatures of Childhood, IV, Heat Dissipating Mechanism, V, Autogenetic and Bacterial Toxins, VI, Venous Condition of the Blood, VII, Impoverished Condition *of the Blood*, VIII, *Reflex Irritation, and* IX, Excessive Nerve Activity

The author uses the term, "neuroses of childhood," to cover all local and general nervous disorders which do not have any known pathologic lesions of the nervous system It is thus seen that the title of the book is more comprehensive than its style and general make up would seem to indicate The papers contain the result of much original research *The chapter on auto-intoxication* is alone worth the price of the volume

Charaka Samhita Translated into English Published by Avinash Chandra Kaviratna Calcutta 1895 Part XIII

The thirteenth fasciculus of this interesting work has reached us, and on examination we find it completes the twelve groups of food and drinks Lesson XXVIII sets forth very quaintly the difference between men that are wise and *those that are ignorant and foolish* Lesson XXIX gives some curious observations on quacks ' Bad physicians or killers of life and helpers of disease" The good physician is thus described by the illustrious Son of Atri "Those that are well born of clear understanding, possessed of experience, skillful, of pure behavior, possessed of mastery over their hands, with souls under thorough control, equipt with every necessary object, with every sense in order, capable of reading the disposition of others, furnished with knowledge of results (processes operations, drugs, etc) are said to be saviors of life and destroyers of diseases"

Black on the Urine The Urine in Health and Disease, and Urinary Analysis Physiologically and Pathologically Considered By D Campbell Black M D, L R C S, Professor of Physiology, Anderson College Medical School *In one 12mo volume of 256 pages, with 73 engravings* Cloth, $2 75 Philadelphia Lea Brothers & Co, Publishers 1895

This book is an English printed one, for the use of students It is very condensed, concise, well illustrated, and will be found extremely useful for those who wish to have in a small compass a recent work on the science of urology It has been carefully brought down to date and will be found a valuable book of reference on the subject Practitioners will find it desirable to have a book handy for reference in the examination of specimens The only defect in it, so far as our observation has extended, is that too little attention has been paid to the examination of urine for bacteria The bacillus tuberculosis and bacillus ureæ are the only ones mentioned, and no specific directions for tests are given in the book, which we take to be a defect of omission, as in an authoritative work of this kind everything relating to the *subject should be set forth*

Manual of Organic Materia Medica, Being a Guide to Materia Medica of the Vegetable and Animal Kingdoms, for the use of Students Druggists Pharmacists and Physicians By John M Maisch, Ph.M, Ph D, etc Sixth edition, revised by Henry C C Maisch, Ph G Ph D 8vo, pp 526 Philadelphia Lea Bros & Co 1895

This, as its name implies, is a *manual or hand-book of* materia medica, adapted to the use of medical students and students of pharmacy The new Pharmacopœia has been adhered to, and the doses are given in metric terms Although the matter in the present volume has been increased by slight enlargements of the pages and condensation, the bulk of the volume is not materially augmented. It will as heretofore, without doubt, continue to be a favorite with students

A Manual of Obstetrics By A F A King, A M, M D, etc, Sixth edition, 221 illustrations, 8vo, 533 pages Philadelphia Lea Bros & Co 1895

This is one of the most popular treatises on obstetrics that has been issued for some years, a fact which has been attested by its having passed its sixth edition We trust, however, that in the next edition our friend will recast the chapter on inflammation of the breast, especially the section thereof which refers to the causes of mammary inflammation, in order that the bacteriology of the subject may be brought to conform to modern views A similar criticism might, without being hypercritical, be extended to the entire Chapter xxxiv, on puerperal septicemia, septic and "non-septic" puerperal inflammations, etc

PUBLIC HEALTH

Smoke Abatement —It will not be very encouraging to the authorities of the many towns and cities in this country who are striving to abate the "smoke nuisance" to read the latest utterance of Sir Douglas Galton, the eminent President of the British Association for the Advancement of Science, on the subject It occurs in his Presidential Address, at the opening of the recent meeting of the Association on the 11th ult After pointing out that much may be done by care in firing, by using smokeless coal and by washing the soot out of the products of combustion, he intimates that in the general use of electricity lies the only adequate remedy and that this is too costly where it must be generated by the use of coal "I can conceive, however, that our descendants may learn so to utilize electricity that they in some future century [!] may be enabled by its means to avoid the smoke in their towns"

"Quis Custodiet Ipsos Custodes" Again —What can be expected of the ignorant and uneducated when those who are to guard their health and cure their sickness openly violate the simplest hygienic precautions? Professor Virchow, Rector of the University of Berlin, declares that in spite of the large number of suitable receptacles for saliva, placed by his order at all convenient places in the university building, the students continue, as in the past, to defile the floors of the halls and rooms that they frequent with their expectorations It is now suggested that a rule be adopted, imposing a penalty for each offense against this common requirement of decency and sanitation, similar to that decreed by the municipality of Sydney in New South Wales, where a fine of $5 is levied upon every person detected spitting in public buildings, vehicles or streets

Diphtheria Antitoxin Statistics in Russia —Dr Zabolotnui has furnished the following figures of the results of the antitoxin treatment of diphtheria in the district of Podolia, which have been reprinted from a local journal of the district in the *Meditzinskoe Obozrienie* In 109 cases proved bacteriologically to be true diphtheria, injections of antidiphtheritic serum were employed The number of deaths was 14, the percentage death rate was therefore 12 8 Previously, under the old forms of treatment, the death rate had been 48 per cent Prophylactic injections were given to 228 healthy children, stated to be members of families in which cases of diphtheria had occurred None of these persons contracted the disease Dr Zabolotnui himself underwent the treatment for an attack of diphtheria, and describes graphically the rapid subjective improvement after the first injection, the disappearance of headache and of the apathetic state into which he had fallen, with corresponding rise in spirits and improvement in all the specific symptoms The temperature fell from 39 6 C to normal after the first injection

Suicide in European Cities —Recent vital statistics show the following numbers of cases of suicide per 10,000 of population Munich, 1 93, Berlin, 2 98, Vienna, 3 2, Brussels, 3 29, Paris, 3 6, Breslau, 3 91 The Vienna correspondent of *The Lancet* furnishes some interesting data concerning suicides in that city In every 100 cases, 77 were men and 23 women Adolescents appear to have even more frequent recourse to this method of terminating their real or supposed miseries, the highest rate being registered at the age of 16 to 25 years Among 100 suicides, 32 5 ended their days by hanging, 23 5 by pistol shots, 22 4 by poisoning, 5 8 by drowning With respect to the poisons, cyanid of potassium was resorted to in 12 7 of the cases, caustic lye in 22 7, phosphorus in 26 1, and sulphuric acid in 7 2 As for seasonal distribution the proportions were in January, 8 5 per cent, in February, 7 6 per cent, in March, 8 9 per cent, in April, 9 1 per cent, in May, 10 5 per cent, in June, 8 7 per cent, in July, 8 1 per cent, in August, 7 2 per cent, in September, 7 4 per cent, in October, 8 3 per cent, in November, 7 8 per cent, and in December, 7 9 per cent

School Diffusion of Diphtheria —Although there was some increase of diphtheria noted throughout the country toward the close of August, the weekly mortality reports for September indicate a much greater prevalence of the disease since school has "taken up" In New York city this increase is so great that the antitoxin supply is inadequate and orders for the serum from other communities have been refused In Chicago the number of deaths during the month has increased fully one-third over that of August In a recent report to the London County Council, Shirley Murphy shows in a very striking manner the relation of the autumnal increase of diphtheria to the school population Taking three periods of four weeks before vacation, the four vacation weeks and the four weeks after vacation, he finds a remarkable reduction in the vacation period from the ante-vacation period, followed by a still more remarkable increase in the post-vacation period In 1892 this reduction was 3 per cent and in 1893 it was 27 per cent The increase in 1892 was 29 cent and in 1893 it was 81 per cent It is to be especially noted that there is no such constant and marked relation discoverable in other age periods, but that it is confined to children of the elementary school age—in that country between 3 and 13 years There is, of course, some decrease and some increase at other ages, but this may be fairly attributed to lesser or greater infection derived from and secondary to the school cases

Returns of Sanitation —At the recent meeting of the Sanitary Association of Scotland held in Greenock, the medical officer of health of that town presented some statistics which speak eloquently of the value of sanitation and of the returns from sanitary expenditure Prior to 1860 the town had been repeatedly scourged by outbreaks of the contagious and infectious diseases—the death rate for the twelve years 1843–1854 inclusive being 35 5 per 1000 of population, rising to 61 3 in 1847 and to 64 2 in 1849 The cholera epidemic of this latter year caused an inspector to be sent to the town by the General Board of Health in London, who pointed out glaring defects in the main drainage and other matters This was followed by radical improvements of the health administration, further pollution of the harbor was remedied by the construction of a complete system of main sewers, the water supply was improved at a cost of nearly two million dollars, another million was expended in alterations under the Artizan Dwellings Act, numbers of dilapidated dwellings were destroyed, new streets were opened, letting in sun and air, and sanitary reforms were carried out in other directions The increased working force of the population, its saving of doctors' bills, medicines, nursing, wasted time, suffering, funeral expenses, etc, may be inferred from the following figures from 1865 to 1869 the death rate was 32 46 per 1000 of population from 1870 to 1874 it was 29, from 1875 to 1879 it was 23 09, from 1880 to 1884 it was 22 13 from 1885 to 1889 it was 18.28 What is true of Greenock is true of every other place where systematic, organized sanitary effort is made As Professor Hay said during the Congress "With a rapidly growing knowledge of the laws of health, derived from extended experience and the laborious observations and investigations of many workers, in recent years we have been making a freer and more intelligent use of the powers conferred by the Legislature Our forces in the war against disease and death are being marshalled and outlined with something like military order and precision It were an easy task if time permitted, to cite instance after instance of victorious progress" And for this country—*Let us have a Department of Public Health!*

Longevity of the Typhoid Bacillus—The present serious increase of typhoid fever in Chicago, as well as its epidemic prevalence elsewhere, gives especial interest to the recently published studies of Prof Edwin O Jordan, Ph D of the University of Chicago, on the conditions affecting the behavior of the typhoid bacillus in water[1] Professor Jordan has already indicated in this JOURNAL[2] some of the difficulties that environ the identification of this organism—difficulties which, as he has pointed out, make it imperative to record the source, age and character of the culture used, and in the present elaborate paper he gives additional reasons for vigorous precaution in this particular Among the other practical points with which the paper abounds, a large number of experiments, conducted with painstaking thoroughness, show conclusively that the bacilli invariably live longest in waters containing the largest amounts of organic nitrogen It is a noteworthy fact that this holds true even when no appreciable multiplication occurs This latter interesting circumstance is open to the interpretation either that the lives of individual bacilli are conserved by the presence of organic matter, which acts as a kind of "elixir of life," or that the more hardy bacilli are able to multiply for one or two generations on the slight amount of peptone supplied them, a multiplication that however, is masked by the mortality occurring among their less resistant companions For obvious reasons the second explanation seems the more plausible Briefly stated, the results of the experiments made and recorded by Professor Jordan are as follows

1 The age of the typhoid stock influences greatly the life of the bacilli introduced into water, a freshly isolated stock possessing distinctly greater vitality than one that has been under cultivation for some months

2 The typhoid bacillus when introduced with proper precautions into sterilized Lake Michigan water does not multiply but may, under certain conditions, maintain its vitality for upward of ninety-three days

3 The colon bacillus, on the contrary, under similar conditions undergoes rapid multiplication and may remain alive for upward of 262 days

4 In redistilled water the typhoid bacillus perishes much more speedily than in the water of the lake

5 The quantity of organic matter (peptone) in redistilled water influences fundamentally the life of the typhoid bacillus, so small an increment as 0 0126 organic nitrogen (parts per 100,000) causing a perceptible lengthening of life

6 In sterilized lake water the addition of a still smaller quantity of organic nitrogen—0 0012—affects the longevity of the typhoid bacilli introduced

Health Reports—The following health reports have been received by the Supervising Surgeon-General, Marine-Hospital Service

SMALLPOX—UNITED STATES

Louisiana New Orleans, September 14 to 21, 12 cases
Michigan Detroit, Battle Creek, Battle Creek Township, Marshall Township, Bedford Township, smallpox reported present September 25
Pennsylvania Philadelphia, September 14 to 21, 1 case
Tennessee Memphis, September 21 to 28, 3 cases
West Virginia Wheeling, September 15 to 28, 1 death

SMALLPOX—FOREIGN

Buda-Pesth September 2 to 9, 1 case
Dublin September 7 to 14 9 cases, 1 death
London, Eng September 7 to 14, 42 cases, 2 deaths
Naples September 7 to 14, 2 cases, 2 deaths
Nogales September 14 to 21, 1 case
Odessa August 31 to September 7, 3 cases
Prague August 31 to September 7, 1 case
Rio de Janeiro August 17 to 31, 121 deaths
Rotterdam September 7 to 14 2 cases, 1 death
Rouen August 1 to 31, 10 cases 6 deaths
St Petersburg August 24 to September 7, 7 cases, 1 death
Trieste August 31 to September 7, 1 case
Warsaw August 31 to September 7, 1 death

CHOLERA

France Cognac, August 31 to September 6, 1 case, 1 death, Paris, August 18 to 31, 6 cases[1]
China Hong Kong, August 10 to 24, 7 deaths
Japan Nagasaki, August 23 to 30, 64 cases, 51 deaths, Osaka and Hiogo, August 17 to 31, 346 cases, 264 deaths
India Madras, August 17 to 23, 3 deaths
Austria Hungary Galicia, August 28 to September 2, 9 cases, 2 deaths
Russia Volhynia, July 7 to 12, 49 cases, 13 deaths, July 21 to 27, 222 cases, 72 deaths, July 28 to August 3, 406 cases, 168 deaths, August 4 to 10, 1,004 cases, 322 deaths, August 10 to 17, 2,025 cases, 718 deaths, Warsaw, August 26, 1 case, Ostrog, Kremenetz, Sarpaw, Starokoustantinow, Nowogrodwalynski, Dubno cholera reported present August 11 to 17
Turkey Hudavendkjar (vilayet), August 18 to 25, 82 cases 56 deaths, Konia (vilayet), July 25 to August 25, 5 cases, 4 deaths, Adana (vilayet) August 12 to 24 34 cases, 17 deaths, Aleppo (vilayet), August 6 to 20, 191 cases, 98 deaths, Diabekir (vilayet), August 12 to 24, 184 cases, 223 deaths, Broussa, August 26 to 19, 47 cases, 19 deaths

YELLOW FEVER

Cuba Havana, September 12 to 19, 120 cases,[2] 39 deaths, Sagua la Grande, September 7 to 14, 1 case
Brazil Rio de Janeiro, August 17 to 31, 12 deaths
Mexico Vera Cruz, September, 12 to 19, 5 deaths

NECROLOGY

HENRI ADOLF BARDELEBEN, M D of Berlin, Germany, aged 77 years He was born in Frankfort on-Oder, and studied medicine in Berlin Heidelberg and Paris He became professor in the University at Giessen in 1848, subsequently leaving to take the chair of surgery in the University of Griefswald In 1868 he became a director of surgical clinics in the Royal Hospital of Charity at Berlin He was chief of the medical and surgical staffs in the wars of 1866 and 1870, and was associated with Professors Virchow and Muller in several medical works——J W McAlister, M.D of Albany, Miss September 17——E W Burnette M D, of New York, September 20 aged 52——H N Hollifield, M D, of Sandersville, Ga, September 23, aged 63——Charles Bain, M D, of Murphysboro, Ill, September 27, aged 70

MISCELLANY

The American Public Health Association, have elected Dr Eduardo Liceaga, of Mexico, Mex, President of the Association for the ensuing year The next meeting will be held in Buffalo N Y

The Long Island College Hospital—According to the *Brooklyn Medical Journal* for September, this institution has received a handsome gift from the widow of a recently deceased regent, Mr Henry D Polhemus That gentleman, during his lifetime, had been a frequent contributor to the support of the school He, with others, had more than once come to the front and saved the school from extinction His widow now purposes to construct a memorial which will bear in perpetuity her late husband's name, and which will facilitate the training of students in an institution with which he was closely identified for so many years The building which Mrs Polhemus will erect, and when completed will present to the Long Island College Hospital, will be both a dispensary and a medical college combined It will be situated directly opposite the present college structure The plans are now being prepared by the architect, and it is expected that it will be ready for occupancy in September, 1896, at the time of the opening of the college, and happily coincident with the beginning of the graded system of instruction which the college has adopted The estimated cost of the property and building is $250,000, and it is the purpose of Mrs Polhemus to endow the memorial for its permanent maintenance with an additional sum of $250,000

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[1] The Medical News Sept 28 1895

[2] JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Dec 22, 1894

[1] Choleraic deaths

[2] Largest mortality from yellow fever in Havana since 1884

New Anatomy Law in Wisconsin —Section 1437, of chapter 58, of the annotated statutes of Wisconsin, was amended by the last Legislature so that every public officer having charge of the body of any deceased person, required to be buried at the public expense, not merely "may," but "shall without charge," deliver such body to that member or agent of the State or any county medical society, or of any legally organized medical college who shall first present to him an order therefor, signed by the president or secretary thereof, "stating" that such body will be used only for the promotion of anatomic science within the State, and that the remains shall be afterward decently buried without public charge But, as heretofore, no body of any person who in his last sickness requests to be buried, or of any stranger or traveler who shall have suddenly died, shall be so disposed of And no person so having charge of any such body, it is added, shall sell or deliver the same to any one to be used for scientific or any other purposes outside of the State of Wisconsin Any officer or other person violating any of the provisions of this act shall be liable to the person, society or corporation aggrieved in the sum of $50 damages, to be recovered in an action therefor

The Red Cross Society of Japan —The Japanese have grasped the humane principles and practice of the Red Cross with wonderful avidity Miss Clara Barton, President of the American Red Cross, says "Japan is one of the strongest Red Cross nations in the treaty since 1886, in some respects the most advanced Red Cross country in the world, with its every right protected, its Emperor and Empress not only at the head officially, but actively at the head of its national society, directing all its hospital and relief work, and challenging the world in its efficacious methods" Its first active service of importance was during the insurrection of 1877, which lasted eight months It was then known as the "Hakuaisaka," or Society of Benevolence, and the society was not affiliated with the great international movement When "The Red Cross Society of Japan" was finally formed, the Emperor and Empress granted it an annual subsidy of 5,000 yen (a yen is 99 5 cents) and large money and land gifts for the erection of hospitals Princess Arisugawa, a royal scion, Princess Komatsu, with several other princesses, and a large number of ladies of distinguished families, meanwhile formed a band of nurses After that point was reached the development was rapid, and at the present time the total membership in Japan is probably not less than 100,000 souls Almost every prominent officer is connected with it Altogether the society has received in gifts from the crown between 200,000 and 300,000 yen for the purpose of increasing its efficiency

Amblyopia in Recruits —The seventh annual session of the Ophthalmological Society of the Netherlands was held at The Hague early in June Dr Straub presented a report, on a series of examinations of eyes of young men, entitled "Amblyopia in Eyes of Normal Appearance" He stated that "he had examined 350 young men of almost the same age, all of whom had a visual acuity less than that required for military service, without its being possible with the ophthalmoscope to find disturbances in the media or alterations in the deep membranes On eliminating those whose vision was not less than the average vision proper to their degree of refraction, and hysterical cases and cases of simulation, there remained 171 cases To be absolutely sure of not figuring on cases in which errors of refraction could play any part, sixty-five of these were excluded The 106 remaining cases were divided into isometropes and anisometropes Each group thus obtained was divided according as only one or both eyes were amblyopic, and the latter group was again divided into two parts those with binocular vision, and those without it The figures thus obtained seemed to prove that neither anisometropia nor absence of binocular vision can account for the amblyopia The existence of an amblyopia, in the sense of Schwiegger, must, then, be admitted

"Goldzieher attributes this amblyopia to traumatisms of the eye at birth Noumhoff, who has examined the eyes of fifty children who died during delivery, has found hemorrhages of the choroid in half of the cases It is very probable that congenital amblyopia is caused by very small ruptures of the central portions of the retina, occurring during labor"

An Ancient Fee-Bill.—In a late number of *Le Progrès Medicale* appears the price list charged by the executioners of ancient Paris for their services to the State, in taking life, or cutting off an organ, of convicted culprits The writer of the article has unfortunately omitted to affix the probable date of the schedule of prices, and he does not inform us when the polite Parisians ceased to deal out the terrible punishments of "those former days" There is one item, "the Gehenna torture," that is very suggestive of heat and suffocation, but the explanatory foot note is not supplied The executioner seems to have had two different prices for quartering a man

AN EXECUTIONER'S PRICE LIST

	Livres
To boiling a malefactor in oil	48
To quartering him while alive	30
To affording a criminal passage from life to death by the sword	20
To breaking the body on the wheel	10
To fixing his head upon a pole	10
To cutting a man into four pieces	36
To hanging a culprit	20
To enshrouding the corpse	2
To impaling a living man	24
To burning a sorceress alive	28
To flaying a living man	28
To drowning a child murderess in a sack	24
To burying a suicide at cross-roads	20
To applying the torture	4
To applying the thumbscrew	2
To applying the buskins	4
To administering the Gehenna torture	10
To putting a person in the pillory	2
To flogging	4
To branding with a hot iron	10
To cutting off the nose, the ears or the tongue	10

Statement of Facts to be Covered by Medical Certificate of Lunacy —The Massachusetts Legislature has suggested a form for a medical certificate of lunacy, covering 1, sex, age, nativity, color, occupation, whether single, married, or widowed 2, number of previous attacks, when present attack began [If the patient has ever been an inmate of an institution for the insane, when, where, and for what length of time, and whether discharged, recovered or otherwise] 3, was present attack gradual or sudden in its onset? 4, what is the bodily condition of the patient? 5, has the patient been physically injured? If so, when and to what extent? 6, is the patient subject to epilepsy? 7, is the patient cleanly in dress and personal habits? 8, is the patient paralytic, violent, dangerous, destructive, excited or depressed, homicidal or suicidal? 9, what is the supposed cause of the patient's insanity? [State both the predisposing and exciting cause] 10, has the patient insane relatives, and if so state the degree of consanguinity, and whether paternal or maternal? 11, what are the patient's habits as to the use of liquor, tobacco, opium, chloral or other narcotic? Following this statement of facts, the examiner who makes certificate that the patient is insane, and a proper person for care and treatment in an institution for the insane, is required to state the facts on which he has formed his opinion —what the patient said to him, what the patient did in his presence, the patient's appearance and manner, other facts indicating insanity, including those communicated by others, and what, if any, change there has been in the patient's mental condition and bodily health.

Soloids for Antiseptic Uses.—Under the above style, a well-known London firm of manufacturing chemists has introduced three or more forms of antiseptic tablets for sanitary gynecologic and surgical purposes. One form is that of corrosive sublimate, with a sufficient quantity of an alkalin chlorid to prevent decomposition in hard water; one of these soloids dissolved in ten pints yields a solution sufficiently strong to destroy micrococci and bacilli, but this must be increased ten times—one soloid in one pint of water—for the purpose of destroying the spores of microörganisms referred to; and this is the strength usually employed in dealing with exposed surfaces, such as walls and floors of infected rooms, textile fabrics used in connection with patients, to purify the hands of operators in various surgical work, and for the proper cleansing of given skin areas whereon it is intended to make incisions. One of these soloids to a quart of water will suffice to secure an antiseptic solution suitable for sponges, instruments, etc. These soloids are colored in such a way as to make the resultant solution unlike any other liquid usually associated with the operating table or the sick room. A second variety of soloid is that of a combination of the iodids of mercury and potassium. It is claimed that this soloid possesses twice the bactericidal strength of the sublimate salt, does not precipitate albumin, is much less toxic and less liable to cause irritation. Each soloid contains 8.75 of the double salt, so that one dissolved in a pint of water gives a solution of 1 to 1,000 for use in the treatment of newly exposed surfaces in surgical operations, and to insure the perfect asepsis of the hands and instruments. A third preparation is called the "Local Government Board" soloid, because it is made up in such a manner that two of these soloids will afford a solution of the strength and character recommended by the Local Government Board Memorandum of 1892. These L. G. B. soloids are highly convenient, and rapidly soluble in ordinary well water, and their peculiar but perfectly harmless coloration and terebinthine odor are safeguards against poisoning by accident or mistake. White fabrics soaked in the soloid solution are stained a very light blue, but this color is nearly discharged by merely rinsing the fabric in cold water, so that no damage is caused to linen, etc., with which it may come in contact. The prices of these antiseptic tablets per hundred, vary from 50 cents to $1.45, "on the other side."

Abandonment of Fort Hancock, Texas.—This military post has apparently fulfilled the purpose for which it was established, for, by direction of the Secretary of War, Sept. 6, 1895, it will be discontinued and the public lands on which it is situated will be turned over to the Department of the Interior. This post was established in 1872 as an outpost on the Rio Grande, fifty-two miles southeast of the town of El Paso. At first it was called Camp Rice, and was looked upon as of so temporary a character that no mention was made of it in the Barrack Circular published by the Surgeon-General's office in 1875. At that time Dr. J. J. Hammond gave advice as follows to medical officers who were ordered to duty in the Department of Texas: "The service is essentially frontier service, including garrison duty, escort duty and duty with scouting parties, and medical officers coming here for a tour of duty should provide themselves accordingly. There is little time or opportunity for the enjoyment of luxuries. There is no society outside of the garrison, and this gives an opportunity to officers to avoid living beyond their means. Letter paper, envelopes and pens should be brought along; slat cots with legs to fold up, for bedsteads and lounges, and hair mattresses and pillows are most suitable. Wash stands and ottomans can be extemporized from boxes and barrels. Chairs not glued together, or camp stools are the best as being less costly to transport. Bare floors in summer, and matting or oil cloths in winter, are more healthy and more appropriate than carpets, etc."

All this became changed with the opening of the Southern Pacific Railroad. Fort Hancock became a permanent post built of brick, raised two feet from the surface on stone foundations. Although 2,500 feet above the sea level the site was a flat of sandy loam, covered with chapparal and liable to overflow because only a few feet higher than the banks of the Rio Grande. The barracks was a long two-storied building, roofed, like all the other buildings at the post, with shingles, and with a wide veranda along its sides. The lower story contained the orderly room, store room, library, kitchen and dining room, baths and tailor's shop; the upper, the dormitories, well lighted and with ridge ventilation. The officers' headquarters were commodious brick cottages. The hospital consisted of one ward of eight beds, with doctor's office, dispensary, steward's room, attendant's room and baths in the main building, and kitchen, dining room and store rooms in a frame addition. The water supply was pumped from a well near the bank of the river into tanks, one of which was used for sedimentation, a second was used as a distributing reservoir, and a third with a higher water level was kept as a reserve in case of fire. There were three-fourth inch pipes for service in all the buildings and nine hydrants at suitable points for the fire service. Waste water was carried into cesspools; excreta disposed of by the dry earth system in galvanized iron boxes, and garbage carted to a dumping ground a mile distant from the post. During the day in summer the temperature ranges from 95 degrees F., to over 100 degrees, but the nights are generally cool and comfortable. The mean temperature of the winter months is about 40 degrees, but sudden changes are then more likely to occur than during the summer months. Fogs are of rare occurrence, but high winds and dust so frequently prevail as to be a cause of nasal and bronchial catarrh. Many cases of malarial fever have been reported from this post, but in most of them the disease was probably contracted when the troops were on scouting duty in other parts of the Department.

Electrolysis in Detachment of the Retina.—The *Annales d'Oculistique* for July contains a report by Dr. Terson, of Toulouse, of twelve cases of the above treatment. The cases were all serious and some of them desperate in their gravity. One of these resulted in a recovery that has lasted nine months; there was improvement in five cases continuing from two to nine months; there were two with negative results and in one case the trouble was aggravated. The report of the successful case is given, in part, below.

"A female 34 years of age, a seamstress, came to the ophthalmologic clinic of the Hôtel-Dieu at Toulouse, on August 6, 1894, stating that eight days before she had lost the sight of her right eye. She had at first noticed a black mass which prevented vision on the nasal side, and then in a few hours the curtain advanced to the middle of the eye, and little by little invaded the entire eye, so that on the next day she could only distinguish light from darkness. It was in this condition that I saw her. She had always been myopic, and had always seen less with the right eye than with the left, of which she did not complain. On inspection I noticed that the anterior chamber was of abnormal depth, the pupil reflex was very weak, and the iris trembled slightly. The fundus of the eye had a dirty, yellowish appearance, like that seen at the commencement of infection. The tension was manifestly diminished. On ophthalmoscope examination, I found an extensive sac-shaped detachment, which included more than a third of the retina. The disc was scarcely distinguishable on account of a generalized cloudiness of the vitreous humor. The left eye was myopic 7 dioptres with weak vision.

"Although considering this condition as desperate, I submitted the patient to electrolysis, and applied a current of 5½ milliampères for one minute. No reaction occurred. Forty eight hours after, I had the patient get up to make an ophthalmosopic examination. The removal of the bandage was a revelation. The vitreous, which had regained its transparency, enabled me to see atrophic disseminated choroidal plaques and a macular lesion. There was no longer a trace of detachment of the retina. The anterior chamber had become more shallow, and the pupil reflex was normal. Wishing to follow the experiment to the end, I did not prescribe any further treatment. On the sixth day there was no trace of detachment. The external appearance of the president and the secretary of each school, which shall embrace certain questions specifically set forth

The rules of the board are specifically directed against any medical school that holds preliminary examinations for its incoming students, and its strict application of them will exclude the graduates of nearly all medical schools from practice in Missouri, save after an examination approved by the board Granting that the board is actuated by a praiseworthy desire to elevate the standard of medical education and practice, it would seem that these efforts to obtain that end were at least ill-considered In the first place, there is no uniformity in the attainments of those who may possess high school diplomas, in the second place, no difference is made between the high school diploma and the diploma from a college In all reason, a certificate of entrance to a college should be equivalent to a high school diploma In the third place, the exaction of a teacher's first-grade certificate is evidently the result of ignorance of the common requirements for such a certificate For in many States the applicant for such a certificate must give evidence of having been a teacher for three years The better colleges of the city are in full sympathy with the board in their effort to raise the standard of medical education, but the faculties will doubtless oppose the continuance of rules which will ultimately give them only local students This year the regulations of the board have injured only the weaker colleges of the city and State

THE MARION-SIMS COLLEGE OF MEDICINE opened on the 24th ult with a class of 325

HOSPITAL ABUSES —During the week, investigation has shown that there have been gross abuses at the Female Hospital during the past year The exhuming of several coffins shows that an unlawful traffic in bodies was carried on at the hospital

Washington Notes

HEALTH OF THE DISTRICT —The report of the Health Officer for the week ended September 21, is as follows number of deaths white, 52, colored, 61, total, 113 Death rate per 1000 per annum, white, 14 41, colored, 36 08, total, 21 32 Death rate per 1,000 per annum for corresponding week last year, 20 76 There was a decrease in the death rate last week The deaths reported to the Health Department numbered 113 as against 122 in the week before The annual rate fell from 23 02 to 21 32 As compared with the last report the mortality from diarrheal diseases declined from twenty-one to twelve, that of infants under 5 years old from forty-nine to thirty-eight, and that from typhoid fever from twenty-one to thirteen The investigation into the cause or causes of the prevalence of this latter malady in the District, as referred to in last week's report, is still in progress, with a view to the adoption of such remedial measures as possible Aside from this disease the city is comparatively healthy, being quite free from contagious affections and malarial troubles, with a continuously decreasing mortality from summer complaints

MEDICAL DEPARTMENT OF GEORGETOWN UNIVERSITY —The opening exercises of the Georgetown Medical School took place on September 30 Surgeon-General George M Sternberg, U S A, delivered the inaugural address

MEDICAL DEPARTMENT OF THE COLUMBIAN UNIVERSITY —The opening exercises of the Columbian Medical School took place on October 1 The address was delivered by Dr W W Johnston

MEDICAL ASSOCIATION OF THE DISTRICT OF COLUMBIA —The regular meeting of the Association was held on October 1 The election of new members was the principal business

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA —The regular weekly meeting of the society was held October 2 Dr Wm P Carr delivered an essay on "The Nature and Treatment of Tumors of the Breasts"

WASHINGTON OBSTETRICAL AND GYNECOLOGICAL SOCIETY —The annual meeting of the society took place October 4 The President, Dr H D Fry, delivered the Presidential Address The annual banquet will take place on October 18

DR S C BUSEY has almost entirely recovered from his late accident

THE EASTERN DISPENSARY —A committee representing the dispensary called upon the Commissioners during the week, for the purpose of getting the latter to include in their estimates to Congress an item of $10,000 for the purchase of the building and ground occupied by the dispensary on Delaware Avenue

GARBAGE DISPOSAL —The crematories for the disposal of garbage will, in all probability, be completed on or about January 1 The contractors for the work have agreed to build the plant and submit it to test for three months without cost to the District If they are satisfactory they will be accepted, if not, they are to be removed at the expense of the contractors

THE COLUMBIAN UNIVERSITY'S NEW PRESIDENT —The new President of the Columbian University, Dr B L Whitman, has arrived and formally entered upon his new duties The President is particularly interested in the Medical Department, and his connection with the school will in itself greatly increase the number of students

THE PUBLIC SERVICES

The Retirement of Medical Director Gihon

MEDICAL DIRECTOR ALBERT LEARY GIHON U S Navy, was retired September 28 He was born in Pennsylvania in 1833, and the naval record of this officer is unsurpassed by any member of his corps His phenomenal public services entitle him to public recognition, and his long and faithful service in our ASSOCIATION has endeared him to its members The members will be pleased to know that DOCTOR GIHON will be even more active as a medical writer, now that he is free from official care and the readers of the JOURNAL are promised occasional articles from his forceful pen Few write with more elegance and none from broader sources of information

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S Army, from September 21 1895 to September 27, 1895

Major Joseph B Girard Surgeon (Presidio of San Francisco, Cal) is granted leave of absence for one month, to take effect about the 5th proximo

Major James C Worthington, Surgeon, is granted leave of absence for three months, on surgeon's certificate of disability

A board of medical officers, to consist of Col Charles H Alden, Asst Surgeon General, Lieut Col William H Forwood, Deputy Surgeon General Lieut Col David L Huntington, Deputy Surgeon General Major Charles Smart, Surgeon Major Walter Reed, Surgeon is constituted to meet at the Army Medical Museum Building in Washington D C, on Tuesday, Oct 1 1895, at 10 o'clock A M, for the examination of candidates for admission to the Medical Corps of the Army

Major Henry Lippincott, Surgeon is relieved from duty at Ft Adams, R I, and ordered to Ft Sheridan, Ill, for duty relieving Major Alfred C Girard, Surgeon Major Girard, on being thus relieved, is ordered to Ft Douglas, Utah, for duty, relieving Major Charles L. Heizmann, Surgeon Major Heizmann, on being thus relieved, is ordered to Ft Adams, R I, for duty

Capt Richard W Johnson, Asst Surgeon, will be relieved from duty at Ft Huachuca, Ariz, upon the arrival there of Capt William J Wakeman, Asst Surgeon, and ordered to Ft Logan, Colo, for duty

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending September 28, 1895

Surgeon D Dickinson, detached from the "Minneapolis," and ordered to examination for promotion

Surgeon D N Bertolette, detached from the "Atlanta," to duty on the "Minneapolis"

LETTERS RECEIVED

Anderson, Willis S Detroit Mich Allport, Frank, Minneapolis, Minn, Ashmead, A S, New York N Y Adams, D S, Manchester N H Antikamnia Chemical Co, St Louis, Mo

Babcock, Sadie, Osage, Iowa, Battle & Co, St Louis Mo, Bishop, D D, Chicago Ill

Cochran, Jerome, Montgomery, Ala, Castle, Wilmot & Co, Rochester, N Y Clift, Frederic St George, Utah, Clarke, A P Boston, Mass, Cantrell G M D, Little Rock, Ark, Colburn, I M, Richland Center, Wis

Dewey W F, Petersburg, Va

Freudenthal, W, New York, N Y Field, A G, Des Moines, Iowa

Gallaher, T J, Denver, Colo Graham, A J & Co, New York, N Y, Gillette, W J, Toledo Ohio

Hummel, A L (2), New York, N Y, Henry Pharmacal Co, Louisville, Ky

Ingals, E T, Chicago, Ill

Johnson, H L E, Washington, D C

Kempker, J F, Keokuk, Iowa, Keiper, G F Lafayette, Ind, Kellogg, J H, Battle Creek, Mich, Koplik, Henry, New York, N Y, Klingensmith, J P, Blairsville, Pa

Mayo, W J, Rochester, Minn, Marchand, Chas, New York, N Y Martin, J Davis So Dak., Mann E C, New York, N Y, McDill, J R., Milwaukee, Wis Madden, Jno, Milwaukee Wis

Newman, H P, Chicago Ill Norbury, F P, St Louis, Mo, New York Post Graduate Medical School, New York, N Y, Newman, H P., Philadelphia, Pa, Noyes W B (2), New York, N Y

Pettyjohn, E S, Alma, Mich, Pollock R M, Princeton, Ill

Ruggles Gale Co Columbus, Ohio, Reynolds, F R, Eau Claire Wis Reyburn, J A, Elk Horn, Va

Sanderson A J St Helena, Cal, Shepard, C H, Brooklyn, N Y Stearns, F & Co, Detroit Mich Small, E H, Pittsburg, Pa, Senn, N Chicago, Ill

Ulrich, C F, Wheeling, W Va.

Ward, M R, Pittsburg, Pa

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ORIGINAL ARTICLES

ANTIPHTHISIN IN TUBERCULAR AFFECTIONS OF CHILDREN

Read in the Section on Diseases of Children at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md, May 7 10, 1895

BY PROF EDWIN KLEBS M D

DIRECTOR OF THE LABORATORY FOR THE STUDY OF TUBERCULOSIS CONSULTING PHYSICIAN IN THE WINYAH SANITARIUM

ASHEVILLE N C

The therapeutic application of antiphthisin has thus far been limited to comparatively few practitioners, partly on account of limited production, and partly because the remedy was only furnished to such as gave us assurance that they would restrict its application to cases which were not too far advanced in the disease, and in which we could still hope for its beneficial effects

The reason for restriction is apparent by the well known fact that specific medication can only be fully effective, when it is applied to pure uncomplicated cases, to the exclusion of those in which other pathologic processes are also present

It would certainly be unreasonable to demand that this remedy which has a specific germicidal effect upon the tubercle bacillus only, shall also remove and cause the cure of pathologic changes, which result remotely from the primary cause and, more unreasonable still, that the remedy shall also favorably influence and cure complications which like infection with other pathogenic germs have no relation to tuberculosis at all, more, than that they may be associated in the same patient

In all such cases it is necessary to remove the complications by other treatment, either before or in conjunction with the application of the specific remedy, but the final results are determined by the importance and curability of such attending pathologic processes

We see thus, that the use of a specific germicidal remedy can only be fully effective when the disease is still uncomplicated by secondary degenerations, and is free from complications which, unfortunately are present in most cases of tubercular disease as they come under our notice, there are, however, not a few cases of purely tubercular affections in an early stage in which the results of specific medication are highly satisfactory In such cases I have every reason to believe that under proper use of the germicidal products obtainable from the bacillus of tuberculosis, a cure will result almost without exception For these as in all other therapeutic efforts the only unavoidable condition is that the organism itself shall still have the power to use and appropriate the introduced curative substance, for under no circumstances can we otherwise conceive the cure of disease, than that the living organism must, itself, take an active part in its removal

Since the living organism can not by any means be compared with dead substances or matter which we can disinfect, regardless of the changes which occur within it, we have little to hope from chemic or physical means in the form of high temperatures, acids, alkalies, etc, and all hopes in this direction have thus far been changed to disappointment, their action having invariably been found a distinctly local one, beyond their direct application, they lose their intended effectiveness in the living organism by their undergoing insoluble or inert chemic combinations, by saturation or by diffusion

With specific germicidal agents we have become acquainted only within more recent years, and, so far, they all are products of specific germs and not subject to changes such as we have learned do occur in the chemic and physical agents referred to, on the contrary, we observe them to reach the diseased structures directly and uninjured, and to become effective there

This fact is not explained by assuming with Robert Koch, a peculiar affinity or attraction, the same as was taught by older schools of medicine to be the action of drug remedies, but by the imbibing and transportation of these curative substances through the agency of leucocytes

For this, speak the penetration of leucocytes into the tubercular tissues and the production there of a substance which behaves peculiarly to certain anilin dyes, and the presence of which can only then be demonstrated when the specific curative substance has been introduced and has inaugurated the cure[1] With this occurrence we see the tubercle bacilli diminish and disappear, while within the coagulated protoplasm of tubercular cells, the nuclei appear again in their normal coloring properties

Upon the basis of such experimental observations, we can explain and understand why we are able to favorably influence specific pathologic changes within the living organisms with relatively small quantities of the specific remedy, and this I have shown to be the action of antiphthisin, while the crude tuberculin at the same time produces injurious effects, containing as it does, all the toxic substances produced by the tubercle bacilli in their cultures

It was necessary to preface this paper by the foregoing remarks in order to show the importance of proper selection of cases, and to also indicate the limitations of the remedy

Among the favorable uncomplicated tubercular processes are, in the first place,

THE TUBERCULAR AFFECTIONS OF CHILDHOOD

That the heretofore available therapeutic agents are insufficient for the treatment of scrofulosis is easily demonstrated, and I need only to point to the unsatisfactory results in the tubercular affections of bones and joints of children

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[1] Klebs Tuberculose, page 214

Dr. Robert [illegible] Library
[illegible] Medical College
32584

The frequently observed cheesy myelitis of the long bones, although subjected to resection, is often followed by renewals of the process, which may finally compel ablation of the entire limb, and even with such radical operation, the life is not infrequently lost through extension of the disease to the pelvis, the spine or to internal organs

These cases are peculiar in the often observed long duration of the tubercular disease, although extensive destructive processes and extensive involvement of the glandular structures are present, without seriously damaging the general condition of the patient, a fact which makes them especially adapted for the treatment with antiphthisin

The danger of depending for the ultimate success upon the heretofore customary treatment is, however, shown, by the unexpected occurrence of inflammation and suppuration, by the advent of which the favorable time for specific medication has been lost, while the insufficiency of internal medication is also demonstrated, and we can not emphasize too much the fact, that scrofulous affections are primarily of a tubercular character, which so long as they remain purely tubercular, run their course without inflammatory complication

It is entirely the same with all other scrofulous and tubercular affections which, so long as inflammation and suppuration have not occurred, are all amenable to the antiphthisin treatment

What clinical results may be obtained will appear from a short resumé of cases treated by me, the number of which I regret is not as large as I could wish

In giving my experience, I divide my cases into several natural groups, the first of which I may call

THE LATENT TUBERCULOSIS OF CHILDHOOD

Of this group we find numerous examples in tubercular families The, at birth, apparently healthy children, show sooner or later a retardation in growth and that pale appearance, with thick upper lips, which may remind us of myxedema, and which on the whole we call the scrofulous diathesis In other cases the organism is simply retarded in its development, sometimes altogether, often only in length, the children remaining then short only, in other instances they grow rapidly in length, at the expense of corresponding breadth and fullness In any case, the absence of glandular swelling may simulate nutritive disturbances due to other causes which the physician hopes to overcome by dietetic and roborant treatment, and although at times successful, failure to correct the evil is by no means an exception, and the truly present latent tuberculosis is attested by the common saying that "such children sooner or later become tuberculous"

Just upon this point I desire to distinguish between the more modern views based upon bacteriologic research and the older theories based upon empirical observations only

We fortunately know now quite well, that tubercular infection does not necessarily cause stormy or violent symptoms, but that, on the contrary, it may remain latent for many years, and only show its presence by more or less nutritive disturbances which, instead of being predisposing conditions, are in fact the expression of the already present tubercular disease

If any experienced observer would still doubt this, he can certainly recall cases from his practice, in which the history shows such nutritive disturbances having been present in childhood, and in which during youth or early manhood a more rapidly developing tuberculosis occurred Neither will he have missed cases in which such latent tubercular affections have been approximately recovered from during childhood, and who, nevertheless subsequently, perhaps after considerable lapse of time, died of the disease Such cures when obtained through dietetic and climatic influences are, as a rule, not lasting, they do not assure against a later development, indeed, they may carry with them even a certain degree of danger, and I have repeatedly seen cases of young strong subjects in which suddenly, in connection with unusual or violent exertion, the acutest forms of pulmonary tuberculosis occurred In such cases we can then show anatomically a small, not previously diagnosed cavity from which dissemination of the tubercle bacilli took place as a consequence of such over-exertion

The practical physician may reply, that we certainly can not look upon all badly developed or poorly nourished children as tubercular, and this is not the case, neither is it necessary to here consider the other causes for nutritive deficiency in childhood But I consider it quite certain that by far the greatest number of such cases are subjects of latent tuberculosis, especially when no other good and sufficient cause is apparent The question is, How are they to be diagnosed, when the physical examination of organs is negative?

The answer is very simple, and it is a matter of surprise that the method of which we avail ourselves for recognition of latent animal tuberculosis has not been taken advantage of for diagnostic purposes in the human subject also

The greatest credit is due to certain American health authorities and statesmen to have first made practical use of a scientific fact in the systematic application of tuberculin for the recognition of latent tuberculosis in cattle, and history will recognize it equal in importance to the introduction of vaccination for smallpox

One might well ask why this simple and sure procedure has not found recognition and practice for the diagnosis of latent tubercular affections in the human subject? Whatever the answer may be, whether due to the objection of patients and parents, or to want on the part of the physician of proper insistence for such test, or whether the neglect lies in the newness of the procedure, as contrary to existing modes and habits, the members of the medical profession can not ignore and escape this issue, for the truth of its value is beyond doubt, and the test must be insisted upon in all cases where the diagnosis can not otherwise be sufficiently established

Among my cases of latent tuberculosis, I will call your attention to but few

Case 1—G B, a delicate girl aged 6 years, has been the subject of cough without any physical evidence on the part of the lungs, she was highly anemic, with deficient development of the osseous and muscular system, there was also slight swelling and tenderness of the cervical glands, râles could be shown in both apices, after the use of 20 cubic centimeters of antiphthisin, the child not only lost her cough entirely with disappearance of the râles, but she improved remarkably in general health and appearance, and has since remained entirely well

Case 2—N B, child 10 years old, tall and slender, the father died of tuberculosis There were only slight differences in the percussion note Very careful percussion showed, however, slight dullness in left apex posterior, on the right side posterior a little more marked relative dullness extended to the spine of the scapula In this locality inspiratory ronchi were also present and extended further downward, in several places, there was also blowing expiration, especially over right apex

After the use of 50 cubic centimeters of antiphthisin in thirty two days when she was discharged, the child gained two and one-half pounds, coughed only occasionally, no more dullness could be demonstrated, and since then has been entirely well

Case 3—O St, boy 13 years old,[2] suffered from asthmatic attacks for the last year, is imperfectly developed for his age, lips and nose thickened, has been mentally retarded also Hydrotherapy, climatic influence and local treatment of the nose have been of no benefit Weight 107 pounds, low temperatures, between 36 5 and 36 7 C, frequent coughing paroxysms, especially nights and with considerable dyspnea Physical examination showed moderate dullness over left lung, posterior to middle of scapula, and supraclavicular in front, also a small area of dullness at lower angle of right scapula, auscultation over left apex front and back gave blowing expiration and harsh inspiration, with here and there accompanying ronchi, also roughened respiration over the dull area at lower angle of right scapula At times expectoration, but none obtainable for examination, the expectoration disappearing entirely in the early part of the treatment After six weeks his weight had increased seven pounds, there was no cough no asthma and his general health was so completely restored, and his appearance so improved, that his mother upon her arrival could hardly recognize him to be the same child Physical examination showed nothing abnormal in his respiration, slight difference on percussion was still present

Under the influence of specific medication the tubercular intoxication apparently ceased, and the deficient nutrition gave place rapidly to normal conditions This case is the more interesting since long-continued climatic and hydropathic influences, as also the local treatment of the nose, were entirely without benefit

Since percussion differences were still existing, I did not consider this case as radically cured, but it is fair to presume, from the result obtained, that by timely repetition of the treatment further tubercular development can be prevented

In a second group of cases, I include

PURE NON COMPLICATED SCROFULOUS AFFECTIONS

Since the term, scrofulosis, is established, I think best to retain it, but I understand it to mean the specific pathologic processes occurring in childhood, produced by the bacillus of tuberculosis The form and composition of the cheesy deposits in scrofulosis is equally characteristic with those which we find in the so called "pearl disease" of cattle, and which are at times more or less calcareous, pediculated, or rich in granulation tissue resembling sarcoma

The scarcity of tubercle bacilli is usually common to both, which made the recognition of their etiologic identity exceedingly difficult Both are auspicious examples of the variation of pathologic processes produced by the same cause but upon a different soil

The scrofulous deposits, which I consider as the essentials of the process, are the product of the reaction, to the tubercle bacilli, on the part of the youthful organism, and may therefore be looked upon as a defense against the dissemination of the infecting germs If the defense is broken through, we see tubercular dissemination occur from the bronchial glands into the lungs or into the blood, from the cheesy nodules or deposits of nerve centers into the meninges, etc, showing that the tubercle bacilli must have been present from the beginning in these deposits How should they have found their way later into these non-vascular masses? for, indeed, we can no longer accept the theory of spontaneous generation

If further proof is, however, needed, we can also furnish it therapeutically, for if by any manner of procedure we succeed in destroying the tubercle bacilli, the cheesy deposits disappear According to the sentence "*Sublata causa, tollitur effectus*," must we conclude with mathematical certainty, that the tubercle bacilli are the cause of scrofulous new formations

Not infrequently we witness such a result through the inherent forces of the organism, when they are furthered upon Hippocratical principles, but in many cases such a natural recovery is impossible or only obtainable after irremovable and serious injury has occurred, of which the following case is a striking example

Case 4—S B, girl aged 16[3] was referred to me in Karlsruhe on account of a scrofulous eye affection Her development was retarded, corresponding to the age of 10 or 12 years, the insufficient development was the more striking on account of a coexisting hunchback, but her mental and sexual development was also retarded Menstruation had not yet occurred The eye affection which had long been unsuccessfully cared for by Dr Mayer, an experienced ophthalmologist, and in a good hospital, consisted in cloudiness of the left cornea The limbus was covered by a gelatinous swelling, the upper and lower portions of the cornea were infiltrated with dry, yellow masses, and in the center, fibroid degeneration in the form of a leucoma had occurred The entire conjunctiva was much swollen and reddened, traversed by dilated vessels, three large arteries approached the cornea, near the middle vessel upon the sclerotic was a yellow, round, flat nodule 3 to 4 mm in diameter, immovable and covered by the movable conjunctiva, a smaller arterial branch terminated at its edge Beyond the hunchback there was nothing indicative of scrofulosis, elsewhere, especially no enlarged glands She weighed only fifty eight and three fourth pounds and despite the good diet of the hospital, she was thirty pounds short of her normal weight, according to Quetelete's tables

Specific treatment was applied from October 15 to November 22, beginning with 5 milligrams, and increasing to 1 cubic centimeter, in all 13 7 cubic centimeters Its effect upon the eye was early observable The gelatinous swelling disappeared first under contraction of the vessels, then the yellow infiltration upon the upper segment of the cornea began to clear, became smaller and was gone on the twenty-fourth day The lower yellow spot also had by this time become much smaller, the dilatation of the vessels had disappeared There was no more lacrymation or pain On the thirty first day the episcleral spot had also entirely disappeared

Her general condition, in the meanwhile, gave place to a striking change for the better, menstruation had occurred, her appearance was much better, she had gained four pounds in weight

A slight relapse occurred upon the eye the following month, but was quickly controlled by a few more injections The central fibroid degeneration was so far improved that the patient could count fingers at 5 meters, which she could not do before, at half the distance The patient was then discharged but suffered subsequently from two more tuberculous deposits On March 20, she returned with a diffuse swelling on the lower border of the left lower maxilla, which was incised, but discharged only a small quantity of thin pus, after eighteen injections some of which were finally made into the swelling, the latter disappeared entirely A similar swelling occurred at the head of the left fibula disappearing after three local injections Finally, on May following a bush-like dilation of a conjunctival vessel near the lower border, with a small gelatinous infiltration of the edge of the cornea developed, which disappeared after one injection which was made into the subconjunctival tissue Since that time the girl has remained well

I have related this case more in detail, because it is rarely that we can observe upon the human subject in so satisfactory a manner, that which I had repeatedly observed to be the action of tuberculin and of antiphthisin in the animal experiment, namely, the entire disappearance of tubercular tissue or deposits without reaction

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[2] Klebs Tuberculose page 332.

[3] Klebs Tuberculose page 328

In this case it could not be shown, as I have done in the animal experiment, that the conversion and re-absorption of tubercular tissue is preceded by the degeneration and disappearance of the tubercle bacilli, but there is no good reason to doubt that in both instances the same course obtains, and that, under the use of the remedy the tubercle bacilli are directly injured and their virulence destroyed entirely so, as one can demonstrate it to occur in the test tube

The following experiments made by me and published in my work on "Tuberculosis,"[4] may be of interest in this connection Of five guinea pigs born on the same day, two were infected on July 1, 1892, with tubercle bacilli which had been kept five days in a solution of the remedy, while the other three were infected with bacilli from the same culture, but without exposing them to the effect of the remedy, on the eighth day, the three last animals showed a marked difference in their growth, having only gained 11, 50, and 59 grams respectively, whereas those which were infected with bacilli treated with the remedy, had gained 105, and 110 grams The three sick animals were killed, two on July 30 and one on August 24, and were far advanced in tuberculosis, whereas, in one of the other two, killed August 4, no tubercular lesion was found The second animal was killed a year later It had reached its full growth, weighing 681 grams, and showed only the local changes in the abdominal cavity which Prudden and Hodenpyl have shown to be characteristic after the injection of dead tubercle bacilli

Case 5—H B, age 9 years, (the sister of Case 4) was referred to me by Dr Ruppert, of the Vicentius Hospital The pale, poorly nourished child had been treated for some time without result for an affection of the knee joint Could walk only with crutches, *the left knee presented a spindle-form swelling (tumor albus) involving the* external soft parts, while the interior of the joint was filled with soft fungoid masses

The injections were made in part, peri- and in part intra-articular, altogether in the first month 6 72 cubic centimeters were used in twenty-two injections No increase occurred in the inflammatory processes, on the contrary after the fourth injection, the pain was materially diminished, during the second half of the *month the child could walk* without crutches, *and on the twenty-fourth day the swelling had entirely disappeared, nothing* of the fungoid masses could be longer detected and after the faulty position of the limb had been corrected by the application of an isinglass bandage, the child was discharged Three months later the child presented herself to me, *having the appearance of perfect health* Inasmuch, however, as no other evidence of tuberculosis was present, it might be urged that the affection may not have been of a tubercular character, but I believe that the history *of the sister's case, and the result of the treatment would refute such an objection*

The third class of cases are those in which both, the

INVOLVEMENT OF THE LYMPHATIC GLANDS AND OF THE BONES,

bear unmistakable evidence of scrofulosis, cases which, however, differ from the others only quantitatively, as to the extent of the disease These are cases which at the present time are exclusively referred to the surgeon, inasmuch as every other method of treatment is unavailing But even for the surgeon, such patients are not the most desirable, because of the extensive tubercular processes and the obstinate relapses which are observed

I am of opinion that when in such cases multiple deposits exist in the osseous structures, even the operative treatment becomes of doubtful utility because beside the observable and removable deposits, smaller and not observable ones are frequently present, which, although still latent at operation, are apt to develop rapidly thereafter, and in any operative interference the danger of dissemination is ever present

The following three cases were treated in the Diakonissen Hospital and referred by its surgeon, Dr Baer In only one case was the result entirely satisfactory, of the other two, one indeed improved, but a permanent result was not obtained, for reasons which will become apparent

Case 6—S D, aged 3½ years, a well nourished girl Resection had been made of right elbow joint, on account of fungoid caries The child presented numerous scrofulous ulcers communicating partly with the bone, partly with lymphatic glands, many of them fistulous, especially upon the right arm and neck Patient received forty injections between November 1 and Dec 17, 1892, in all 7 cubic centimeters *A small abscess was incised on the right wrist joint, and was treated locally with the remedy* Discharged December 17, when all wounds, ulcers and fistulæ were entirely closed, and all glandular swellings had disappeared. A year thereafter the child had remained free from relapse and was entirely well

Case 7—Isabella T, 5½ years of age, fairly well nourished, but pale, suffered from an enormous number of scrofulous ulcers upon the face, neck and extremities which communicated *mostly with glands, but also with bony parts* The right metatarsal bones upon which several operative procedures had failed, presented a cheesy mass, while the leg of the same side presented long cicatrices, but also ulcerations and swellings in connection with the bones and glands Under the specific injections most of the ulcerations healed, but new swellings occurred constantly, and the condition of the metatarsal bones in spite of again repeated partial resection could not be brought to a cure *In the course of the treatment the child had the measles, which certainly was* not favorable to her recovery In spite of large doses increased to 1 gram per day, and of long continued treatment, the result was only partial Since, with a slight exception, no septic complications were present at any time, the failure can not be attributed to sepsis, but must be looked for in the extensive distribution of tuberculosis and in the deficient blood *conditions I therefore* advised the employment of salt water baths, and *climatic influences* for her general improvement I have not been able to learn the further result Another hindrance in the treatment was the great number of subcutaneous injections, altogether 130 in number, which became very painful Unfortunately, I had at that time not yet learned that the rectal injection of the remedy is equally efficacious, which method of administration I now recommend, especially *in practice* with children

The last, Case 8, of the scrofulous diseases in childhood which came under my care was a boy aged 10, with suppurating tubercular coxitis In this case a short course of injections was without any benefit, and the failure emphasizes the fact that under complicating suppuration and sepsis, the latter must be removed before resorting to specific treatment

While the material which I submit to you is not very large, I nevertheless believe it sufficient to show that particularly in the tubercular affections of childhood, antiphthisin offers most favorable prospects, the selection of cases is of the greatest importance, and we can only then expect its fullest benefit when we select cases which present neither septic complications nor conditions of exhaustion and marasmus, and you will doubtless also appreciate that there are cases, which on account of the great extent of the purely tubercular disease may fail to make a recovery

These limitations, however, suggest that we should employ the remedy in the early periods of the disease, and that we should not lose valuable time in the employment of symptomatic treatment only

Finally, I wish to point out that, in all tubercular affections, the same as in many other severe and serious diseases, their treatment in hospitals or special institutions offers great advantages over that of private practice

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[4] Klebs' Tuberculosis

In Europe numerous institutions for the treatment of children have been established, and should the profession in this country desire it, the Winyah Sanitarium, at Asheville, N C, will be glad to establish a special institution for tubercular children upon the most approved and advanced principles, and with every essential for their care

The excellent climatic conditions of its location would permit their treatment in the open air at all times of the year

DISCUSSION

Dr Larrabee—No one is warranted in making a diagnosis of tubercular meningitis who has not sat at least an hour at the bedside of the child No practitioner who has sat at the bedside of a child an hour will fail to make a proper diagnosis of tubercular meningitis If the three symptoms are there together, it is tubercular meningitis, therefore the importance of emphasizing all these symptoms In the first place there must be some evident deterioration, some disturbance of the mental and physical condition There must be at the same time the knitting of the eyebrow, or the convulsed lid There must be the contracted abdomen, and there must be constipation These three symptoms, and the valuable symptom of projectile vomiting, make a case of tubercular meningitis The projectile vomiting is valuable in showing the disturbance from the center to the periphery But that alone must not diagnose the case There must be the peculiar knitting of the eyebrows, and the constipated bowel and the dilated bowel If the four run together, you are absolutely certain, although the three symptoms are sufficient for the diagnosis ordinarily Whoever takes the history of the family and relies on the statement of the friends in this examination, will often find himself mistaken Large hospital experience from day to day teaches the truth of the words of the lamented great surgeon, who was crowned both in Europe and America with laurels When closing his life he said "Two thirds of the civilized world have syphilis, either hereditary or acquired"

Whenever I give iodid of potash to a child and cure his bronchitis, I consider it a very fortunate result I might say I have touched in the dark the diathesis I say also that when I give these cases of brain trouble iodid of potash, and they get well, I put it down in my category that I have struck a trail, and that I have stumbled upon a recovery in a case where I could not by any questioning or examination find a specific cause The well-known fatality of these cases, the necessarily fatal results of tubercular meningitis, forbid that we should record cases of recovery, and the Doctor is evidently very correct in that

As to the difficulty in the diagnosis of pneumonia, I suppose it is unnecessary to repeat all the difficulties of that diagnosis There is only one way to get out of it, and that is in every case to make an examination of the chest Make it a routine every time

We have before us to day one of the most distinguished gentlemen in either Europe or America, Professor Klebs (Applause) It is a great misfortune that the investigations and researches of Professor Koch were published when they were It was premature, and he objected to it, and he was made to say that which he never thought of saying I was in Berlin at the time and was conversant with the ideas then prevailing, but the London papers got hold of the thing and published it as a cure of consumption which nobody had thought of That publication produced a feeling that has thrown discredit upon all efforts in the direction of Professor Koch's researches

The study of tuberculosis in childhood is an especially interesting one, for the reason that it is only in childhood that we have so many diverse manifestations and the only reason of that is because we have so many growing centers Tuberculosis, like everything else of a morbid character attacks that part at which the greatest activity is manifested In the adult we expect to find tuberculosis in the lung, while in a child we may not find it in the lung but find it everywhere Where there is the greatest activity and growth, that part invites the tubercular bacillus My friend Dr Von Ruck, has admitted the term tuberculosis, but I am sorry he has tied a string to it It is said that scrofulosis is associated with or is part of the tuberculosis in infant childhood We do not believe in the transmission of the tubercular bacillus If a babe be born with tubercular bacillus, it is not going to live long enough to trouble anybody I recognize in scrofula a disease depending upon a debility, born of debility and born of hygienic surroundings, and attended by increase in fibrous tissue We have in the scrofulous subject a tendency to the increase of fatty tissue, the thickening of the lips and nose When the child arrives at the age of 20 or 21, we never hear of scrofula, unless it is engrafted upon the system

Dr Lyon of Connecticut—I would like to ask Professor Klebs, through Dr Von Ruck, what distinction he makes in his use of tuberculin and antitoxin—what difference he makes in the use of the two? In the second place, if he would use them both as diagnostic or both as curative, and whether he so instructs the medical profession I ask these questions to call out answers from him

Dr Upson—I ask Professor Klebs whether antiphthisin is effective when given by the mouth?

Dr Parsons—In my paper I did not mean to depreciate in any sense the importance which attaches itself to this tubercular bacillus My point was illustrated better than I could do it by the remarks of Professor Larrabee, regarding scrofulosis

Dr Griffith—I want to say one thing in support of the idea that this may have been a case of tubercular meningitis which recovered I think we find it more manifest daily that there is a vast amount of dogmatism in medicine I think it possible that perhaps tubercular meningitis may recover There was a case reported not long ago of a child who did recover, and it was proved before recovery that it was tubercular meningitis, by obtaining fluid from the spinal column in which the bacilli were discovered, and yet the child recovered What is proved to have happened *once*, may happen many times, and we are not in a position to say that every case is tubercular meningitis that dies, and every case that gets well is not tubercular meningitis We can not state that

In regard to the diagnosis of pneumonia, I think Dr Larrabee misunderstood me, if he understood me to say that we must not examine the lungs very carefully I say not only that, but that in spite of the examination of the lungs we fail many time in making a true diagnosis The pain in the abdomen is not a symptom in itself of anything important, but when combined with other things is a very important matter

Professor Klebs spoke in German —At the conclusion of his remarks, several gentlemen in the Section requested the Chairman to ask Dr Von Ruck if he would translate into English the substance of Professor Klebs' statements, that those not understanding German might have the benefit of his discourse

Dr Von Ruck made the following statement there is practically no difference between tuberculosis and scrofulosis Scrofulosis represents a tubercular infection in a state of latency at times, but becomes more manifest when glandular, and other manifestations, such as retarded growth and development show themselves The clinician only sees the manifestation in the form of nutritive disturbance, and the tubercular tissue is hidden from his observation This nutritive disturbance, as for instance the thickened upper lip and nose, and the otherwise arrested development of the child, are produced by intoxications with substances representing the products of the tubercular bacilli at the point of their localization If any proof is necessary that these scrofulosis manifestations are of a tubercular character, it is apparent from the distinctly tubercular manifestations which result when the cheesy glands break down and when their products are absorbed into the circulation, either through the lymphatics, or when the tubercular process has perforated a vein, in which case miliary tuberculosis or localization of new tubercular eruptions in distant organs become manifest

If scrofulosis were not primarily tuberculosis, how could we explain the appearance of such distinctly tubercular manifestations following immediately upon the softening and breaking down of the specific scrofulosis new formations? These scrofulous deposits must contain the tubercular bacillus, for it is only through their absorption that the more acutely tubercular infection becomes manifest, and it could not be conceived that in these non-bacillar deposits the tubercular bacillus should have found entrance after their generation, unless we would again return to the theory of spontaneous generation These are all facts that have been demonstrated anatomically and pathologically over and over again, and stronger proof than has been adduced in that direction, it would be impossible to furnish But whatever the practitioner wishes to maintain, I can only recommend to you that he subject those cases of latent or more manifest scrofulosis affections to the test of specific medication, which I can assure you is perfectly safe and harmless, and under which, if the process is a truly tubercular one, these manifestations will quickly disappear, furnishing such results of still further evidence of the truly tubercular character of scrofulosis

As to the diagnostic value of tuberculin, the same has never failed us in the experiments with the lower animals, and will be found equally satisfactory in its application to the human being I must, however, warn against the employment of tuberculin as a diagnosticant in cases where extensive tuberculosis is already present, and in which from the clinical history and course of the disease there should be no reasonable doubt as to the nature of the malady On the contrary, I would advise the use of such a test only when a disease is entirely latent and only manifest by the nutritive disturbance heretofore mentioned, in which case the test is made rather for exclusion of the tuberculosis than for the confirmation of its presence If any of the gentlemen who desire to do so, use tuberculin in the adult, I would advise the hypodermic injection of 5 milligrams, say about 9 o'clock in the morning, after having previously made a complete record of temperature preceding the test for one or two days If, now, a distinct rise of temperature occurs, say within about twenty-four hours, then the evidence is conclusive that the tubercular process is present in the individual The test failing, the experiment should be repeated in the course of three or four days This time, however, with a larger dose of 10 milligrams, with the same observation of temperature before and after its application No temperature reaction occurring to those doses, we can safely conclude that in the individual experimented upon, no active tubercular tissue is present

In children, the first dose for trial could be much less, and the temperature reaction would probably take place from the administration of from 5 to 1 milligram A second dose can be made with 2 5 or 3 milligrams, and a final one with 5 milligrams, with the same precautions as spoken of for the adult

For some time past, however, I have not applied tuberculin for diagnostic purposes in the human subject, but have used the toxalbumins precipitate in the manufacture of antiphthisin A definite amount of the organic substance being present, we can apply this substance with much greater precision, inasmuch as tuberculin varies considerably in the amount of organic substance contained in different specimens

The process of manufacture of antitoxin is as follows we take the ripe culture of the tubercular bacillus and reduce it to one-tenth of the original amount by evaporation in a vacuum This really is the tuberculin as prepared by Professor Koch With this substance we now apply an acid solution of soda iodid of bismuth, and obtain a precipitate which is filtered out This precipitate represents the toxic properties of tuberculin as proved by me both in the animal experiment and in its application to the human being for diagnostic purposes It produces the characteristic general reactions manifest in chill, malaise, aching, depression with rise of temperature and subsequent defervescence, just as we see in the beginning of all infectious diseases It also exerts slight curative properties in the lower animals, but larger doses prove fatal, and entirely so, as does tuberculin Taking now the filtrate After the toxic albumins are filtered out, we can precipitate further by the addition of absolute alcohol and an organic substance resembling in its chemic reaction a peptone, and this organic substance redissolved in distilled water, so that the organic substance present is antitoxin

In the animal experiment we find that this alcoholic precipitate does not produce fever or toxic symptoms of any kind This is so in the human subject as well, but the animal infected with tuberculosis can be cured therewith just the same as we can do with tuberculin, and that in the human subject the tubercular tissue is re-absorbed without the production of any concomitant symptoms of an undesirable character

Dr Larrabee—How about tubercular meningitis after a supposed diagnosis of the case?

Dr Von Ruck—I have not treated any cases myself of tubercular meningitis

SCORBUTUS IN INFANCY

Read in the Section on Diseases of Children, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md, May 7-10 1805

BY I N LOVE, M D

VICE PRESIDENT, AMERICAN MEDICAL ASSOCIATION, 1894

ST LOUIS, MO

Prior to 1891, when the report of eleven cases of scorbutus in infancy was made by Dr Northrup to the American Pediatric Society, I had never observed a case, at least I had never recognized it Going back over an experience of sixteen years, the first five of which were spent in the eleemosynary institutions of St Louis, including one year's service at the General Dispensary under the control of the Health Department, which was the receiving station for the distribution of all patients to the various hospitals of the city and where a very large number of outdoor patients were constantly treated, ranging from one hundred to one hundred and fifty cases a day (the medical colleges of St Louis not having at that time established their private clinics), a number of cases come to mind with their various symptoms suggesting scorbutus, but such cases were invariably found in family practice rather than in public institutions There can be no question as to the importance of the disease

Since the appearance of Northrup's paper in 1891, five cases have come under observation, and they uniformly occurred in the families of the well-to do One case had been fed for ten months with sterilized milk too largely diluted with barley-water, and investigation elicited the fact that equal parts of sterilized milk and a strong solution of barley-water had been the food given

Another case, one of a pair of twins, eight months old, who had been fed with boiled cow's milk largely diluted with plain water and lime-water Both were almost typical specimens of marasmus There had been a very evident failure of assimilation from the beginning, and marked gastro-intestinal irritation. The parents and the attendants had been deceived by the fact that the children being very small at birth and delicate were disposed to sleep almost constantly, and this, they thought, gave evidence of their being satisfied and getting a sufficient amount of food Insufficient food and the consequent hunger usually results in a considerable amount of fretting and crying My being summoned was dependent upon the fact that a few days before, one of the children who had been so uniformly amiable and sleepy, had suddenly developed marked disposition to fret and gave evidence of the presence of pain when handled. I observed, upon examination, a swelling around the right femur in its lower third, with great tenderness, the child crying lustily when the part was handled. Examination of the mouth revealed the fact that the gums were spongy and bled readily No teeth had as yet appeared The swelling of the thigh increased and by the second day purpuric spots appeared at various points upon the surface of the child. It died of exhaustion within three days from the time of my first visit An interesting feature in this case was, that of two children surrounded by exactly the same conditions, one should develop scurvy and the other should not, both, of course, preceded by a history of marasmus The surviving child was given liberally of beef juice, orange juice, and fresh cow's milk, given, when possible, directly from the cow It was surprising to see how rapidly the child began to thrive, and it soon became well nourished

A case came under observation, nine months old, which had been treated from birth, it had been poorly nourished and it was found to have a few spots of pemphigus blebs about the nates shortly after birth A diagnosis of congenital syphilis was made and the child treated accordingly The mother was delicate and very evidently her milk had been poor in quality and quantity The child did not thrive and though further local expressions of syphilis did not appear, it was supposed to be a case of syphilitic marasmus Acute symptoms of great distress and swelling of both thighs developed, on being called into the case, after careful examination, finding puffy bleeding gums and pronounced extravasation of blood in tissues about both femurs, I made a diagnosis of scorbutus This child had been nursed by its mother, who had been kept constantly under mercury almost to the point of salivation The child had also been given mercurials most of the time during its life, and this together with evident insufficiency of food as regards quantity and quality, evidenced that the condition of the child was due to mercury more than syphilis, indeed, I was of opinion that it did not have syphilis at all I stopped all mercurials and administered raw beef juice to the child and occasionally a teaspoonful of orange juice with water Analysis having demonstrated that the mother's milk was in every way deficient and the general condition of the mother being very unfavorable, I at once ordered the child to be weaned and carefully substituted good fresh cow's milk, diluted with a small quantity of water, and added thereto a teaspoonful of Mellin's Food

By careful, systematic feeding, watching the secretions, the child began to improve within a few days and ere many months had passed was finely developed

It is well to emphasize the thought that this disease is most frequently mistaken for rheumatism, stomatitis, rickets, sarcoma arthritis and infantile paralysis As in the majority of diseases which confront us, the important thing is the making of the diagnosis promptly and the removal of the cause, the latter being uniformly dietetic We can not too thoroughly emphasize the thought that scurvy in infants, as well as in adults, is uniformly produced by the lack of certain nutritive elements, certain organic acids, such as citric, tartaric acid, and in combination with potash These special elements are known to be contained abundantly in fresh vegetables and fruit juices, in raw meat and raw milk, and the evidence is certainly accumulating from many directions and my own experience corroborates it, that the modern craze for the sterilization, the complete desiccation of milk tends toward scurvy Of course, it goes without saying, that unsanitary conditions, the lack of sunshine and fresh air increase the tendency to this disease

The reading of the existing literature upon the subject and the careful weighing of the evidence furnished by my own experience and observation, justify the following conclusions

1 That we must impress upon the mothers of the children under our care that, in artificial feeding, something additional is needed beside a food that will stay with the child or apparently agree with it, in other words, that an absence of marked evidence of indigestion does not necessarily mean assimilation

2 More stress on the part of the family physician should be laid upon the tissue building powers of the food presented The primitive mothers who permitted their children early to have some of the food from the table in small quantities were not far wrong, for there can be no doubt that the general nutrition of the child was more completely subserved

In artificial feeding we have a divided duty, regard for the stomach and a general disturbed alimentary canal will often necessitate the temporary use of a food which should not long be continued Many of the commercial foods often meet a temporary emergency and are valuable to that extent Certain it is that the modifying material which can be combined with fresh cow's milk in such a manner as to facilitate digestion by the breaking up of the curd, which is the disturbing element in cow's milk, and at the same time furnish additional elements of nutrition and not interfere with or destroy the elements presented in the milk, which are anti-scorbutic, is a desideratum, and such we have in Mellin's Food

My experience agrees with that of Dr Davis at the Philadelphia Hospital reported in the *American Journal of Medical Sciences*, June, 1891, to the effect that, although sterilized milk often cured and prevented gastro enteric disturbance, the nourishment of the child is insufficient and unless guarded they will pass into a condition of marasmus For the meeting of emergencies, the correction of a gastro-intestinal disturbance, for temporary use in such cases, they are very valuable

Certainly the evidence is overwhelming that children brought up on dried foods without any modification of conditions, soon become pale, flabby and deficient in vitality and even present symptoms of rickets There can be no doubt that the fresh secretion from the mammary glands of the cow, ass or goat, the same as with the human mother, furnish the fresh animal element necessary to proper nutrition

The earliest records of infantile scorbutus appeared in Germany from 1859 to 1873, made by Moller, Bohn, Hirschsprung, Senator and Ingilve, the first appearing in England being made by Mr T Smith in 1876, but not recognized as scorbutic Borrough and Cheadle, of England, were the first liberal contributors to the subject Up to a recent date there was no record of infantile scurvy having been met with in America Since the first able presentment of the subject by Northrup in 1891 there have been a number of contributions upon the subject, notably those of Crandall, Fruitnight, Winters, Booker, Jacobi, Holt, Carr, Louis Starr, Rotch, Henry Ling Taylor, and more recently Egan, Blackader, and Hollopeter, so that the evidence is accumulating that infantile scurvy is a definite entity and general practitioners should be on the alert for it Indeed, we may safely say that the literature regarding this subject is one of the most important and valuable contributions to the fund of general medicine made by pediatric workers

DISCUSSION

Dr Atkinson, of Baltimore—I am very far from denying the occurrence of scurvy in infants It is, however, a condition that must be extremely rare Upon the subject of artificial food for children, there are many conditions lacking in artificially prepared food Nobody doubts that The lack of proper nutrition is more accountable for ill effects than the insufficiency of the properties in the food Condensed milk, properly condensed, is just as perfect food as cow's milk not condensed Not so good as mother's milk, but condensed milk with 75 per cent of its water drawn off by evaporation is just as good as simple cow's milk It keeps longer Condensed milk is simply preserved milk Condensed milk is as much of a preserve as a can of preserved strawberries Each pound of condensed milk contains a quarter of a pound of cane sugar But this is a question, however, that has led me away from the one at issue, which is scurvy in infants We have hemorrhagica occurring in active children as in adults, it might be mistaken for scurvy, and if it lasts long enough will run into conditions that make it hard to distinguish from scurvy—conditions that assimulate scurvy very closely I do not think the cause of which the Doctor speaks was the saving condition, but I think it was the correction of the error in the nourishment of the child that brought about the improvement As I said before I do not state that there is no such thing as scurvy in children, but do say that if there is scurvy as a condition in nursing children, it is a thing of rare occurrence That it may occur, I do not deny, but in nearly every case where there are conditions that assimulate scurvy, it is simply assimulating scurvy and nothing more It is marasmus, or purpura hemorrhagica and allied conditions that bring the vitality of the child to a low ebb

Dr Bishop, of Maryland—There is a percentage of children who die who can undoubtedly have their lives spared by the proper treatment of the mother The proper condition of the mother will result in a live child, and a child whose health may be prolonged for a greater or less length of time It seems to me that one question hinges on the other in these various papers The question of heredity is one of the things involved A child who has a hereditary fault in its physical condition requires different care from that of a perfectly healthy child I think there is a mistake made by some of you gentlemen who have the care of infants in large cities I listened with a great deal of interest to the care of children as described by Dr Cotton But I think instead of their taking such care of these weak children, it would be a much more humane thing to let them die There are quite a large number of children who go to hospitals, as well as in private practice, who ought to be allowed to die It is not a humane thing to let a child that is a victim of the disease of its parent, live as a child and die as an adult Such a child ought to be eliminated from society, because of the evil effect it produces in after life People who have such constitutions are more apt to reproduce in a hurry than those who have perfect physical systems Persons who are predisposed to consumption are much more likely to marry, and, being married, much more likely to have children, than persons of perfect physical formation and conditions I have noticed it as well in the vegetable kingdom The diseased peach tree will produce twice the fruit—certain classes of diseased trees—that a healthy tree will produce It seems to me there ought to be a certain amount of care taken not to permit these diseased children to grow up Let their parents nurse them There is another thing that we are in fault in, so far as regards feeding the child on artificial food Instead of taking good care of the cow that it may produce good artificial food for the child, it would be better to take good care of the mother that she may produce good natural food for the child These artificially prepared foods are good as a rule, but occasionally children are killed by them

Dr Love—The prenatal feeding of the child is an important thing Indeed, I think the physician should keep in mind the wellbeing of the child prior to its conception even The proper and healthful condition of the mother, and all that concerns the child should be considered That opens up a broad field The question of matrimony, the question of who should marry and who should not, enter into it No one knows better than a doctor that the main questions in the matter of matrimony are recklessly disregarded I see my friend Dr Hutchinson, of Des Moines, Iowa He has been a very able writer on this subject of whether marriage is a failure, and all that goes with that particular problem, and I should be glad if the subject could be opened up along those lines

The statement of the last speaker, suggesting that there are some children that ought to be permitted to die, is certainly one that we can not entertain at all Where is there a mother on earth who would consent that her particular infant should be permitted to die? Where is the father, worthy of the name of father, who would consent that his child should be permitted to die? and another thing the physician has no right to entertain, is the matter of life and death The desire to save, has developed new means of salvation Not a baby that can be conceived is so insignificant as not to be worthy of our most profound consideration We may have there the germ of a Garfield or Lincoln or Marion Sims, or Shakespeare, and so on The proposition laid down by our friend can not be entertained at all

The point thrown out by Dr Atkinson, suggesting that he feels that most of these cases come under the head of bad nutrition, etc, is important, but when there is presented to us a baby with such profound symptoms, a baby who has been poorly nourished, and there should suddenly appear great distress, a suggestion of rheumatism of the leg, and marked evidence of extravasation of blood, and there is no question about the pathologic condition, and examination reveals the gums bleeding, almost suggestive of a fungous condition, you then have the same conditions exactly that you find in scurvy in the adult There can be no doubt of scurvy in infants The evidence presented in our meetings by its workers is worthy of profound consideration These workers come from a country whose practice covers a thousand hills, and their testimony is valuable Then we have the testimony of Dr Cotton, our Chairman, who is located in a large city, having to do with all kinds and conditions of children He sees more sick children, I have no doubt, one hundred to one, with special conditions, than he saw twenty years ago when he practiced up in the interior of Illinois, although he was a busy country practitioner The evidence of Dr Cotton along these lines is important In reading the evidence presented to us by Dr Booker and others, we should weigh it thoroughly When a man located in a large city gives his observations, and in addition those as a specialist, in observing the children in the world to-day, and places before us his views as an expert, such evidence is very important The words and views of Dr Atkinson on this subject of scurvy in infants are important

The earliest records of infantile scurvy appeared in Germany from 1859 to 1873, made by Muller and others The first records that appeared in the English language were by Dr Smith in 1876, but then it was not recognized as scurvy Burrow and Schiedel of England, were the first contributors to the subject Since the presentation by Northrup in 1891, there have been a number of contributions on the subject, and I have enumerated the same in my paper I do not mean to say that scurvy in infants is frequently found My cases of scurvy have been found in the houses of the well-to-do, and not among the poor I believe the general practitioner should be on the alert for scurvy in infants, and I think the literature on the subject is most valuable

Dr Valentine, of New York—The remarks of my friend Dr Love, suggest a point that I have wished for an opportunity to bring before this meeting He says that a healthy mother is required to bring forth a healthy child This is manifestly a self evident proposition Is it not a fact that it is within the experience of every one of us, although not engaged in the special work to which this Section is devoted, that a healthy vigorous young girl will marry a man in apparently exceedingly good health, and that shortly thereafter she will complain of pains, rather vague in character, and the girl shows all manner of symptoms which give her friends cause for congratulation The error is soon manifest The girl sinks Perhaps a tumor is found in the abdomen The tumor grows on that one side, and the other symptoms of abdominal irritation suggest the presence of a foreign body in the pelvis, which entails the necessity of an operation to save this woman's life A microscopic examination of the majority of tumors, be they of the ovaries or the tubes, shows the presence of gonococci I am not engaged in children's diseases, but mainly with the fathers of these children, and principally before they are married I have frequently had occasion to observe manifestations of latent gonorrhea, so called by courtesy It is because of defective examination that we do not discover the gonococci Why not? Because of the difficulties entailed by the examination Those who favored me by listening to my paper on modern urethroscopy will agree with me that it is criminal for a man to marry who has had gonorrhea, unless it be proved that he is free from the power of infection Only by destroying the ostii where the gonococci are assembled, where they are latent, can we extirpate the germ It is only by destroying these that we can utterly destroy this disease A week after destroying them it is my habit to make an injection with nitrate of silver I think I can then with a clear conscience consent to that man's marriage

Why should this be in the hands of a specialist? Are not the lives of women and children of sufficient importance to the general practitioner? I hold that the time has come when we should have the temerity to put ourselves on record as advocating the enactment of a law requiring, as a condition necessary to marriage, the certificate of a physician that this man who proposes to get married can not infect his wife with gonorrhea

Dr Hutchinson, of Iowa—I think Dr Valentine's remarks ought to be emphasized by this Section The number of deaths caused by the gonococci is something to which the profession is just waking up I happened to have a most painful case of some trouble of this nature brought to my notice a short time ago We ought to insist upon sounding a danger signal with reference to this infection that is impairing the fruitfulness of the finest women in our country We should advocate some sentiment on the subject It would be a difficult law to enforce, and I do not think we can get at the evil through legislation I should regret the taking of any action that would prohibit marriage on the part of any portion of humanity, because I believe that it might result in something worse I think, however, it would be well to call the attention of the public to the danger to which women and children are exposed by this disease

THE ETIOLOGY OF INFANTILE DIARRHEA

Read in the Section on Diseases of Children at the Forty sixth Annual Meeting of the American Medical Association Baltimore Md, May 7 10 1895

BY ROSA ENGELMAN, M D

CHICAGO

In order to arrive at any just conception of the subject, attention must be directed to the entire alimentary canal, as well as to milk, the staple food of infancy and childhood A straight almost indifferentiated tube swarms from mouth to arms, with facultative, obligate, saprophytic and pathogenic germs Milk, particularly during the heated term, is fertile soil for various fermentations microbic contamination, and the exogenous as well as endogenous development of toxins An unclean mouth, a slight error in diet, constitutional taint, immature sensitive cellular metabolism invite these germs to unusual lodgment and activity

Their great number and variety exclude a specific relation to the particular disease manifestations under consideration The question resolves itself into a discussion of the toxemic, septicemic or pyemic genesis of the several morbid gastro-intestinal disturbances, in which not one or a few, but many and various microörganisms play a part

Escherich long since proved that there is a great simplicity and uniformity of bacterial vegetation, and that increase and variety was due to changes in diet

He demonstrated the constant harmless presence of the bacterium lactis aerogenes and bacterium coli commune in the upper and lower bowel, respectively, and their relationship to normal digestion The assumption of pathogenic attributes by these germs was likewise disclosed

The rise and evolution of the biologic field revealed the shortcomings of a purely pathologico anatomic classification of infantile diarrhea This disorder was in turn ascribed to 1, disordered structure and function inherent to an undeveloped organism, 2, atmospheric and telluric influences, 3, the chemic constituents, metamorphoses and amount of food ingested, 4, the omnipresent germ The far-sighted Hueppe foresaw the dangers of biased opinions He says "For a time, under the influence of Darwinism, bacteriology ran into absolute generalizations, and differentiating signs were not sufficiently valued Then the opposite mistake was made, in that differences were overrated and a one-sided conception of microbial species, specific effects and special products was adduced Toxemia of intestinal origin is foreshadowed by him in his statement that the specific microorganism is not alone the cause of the disease The significance and evolutionary phase of the above cited factors were for a time swamped in the omnipotent germ theory The effort to discover specific microorganisms as the causative agents of the different degrees and forms of diarrhea proved futile, but led to the revelations of Escherich, Baginsky, Stadlhagen, Hueppe, Huebner, Booker, Jeffries, Abelons, Sevestre, Vaughan, Czerny, Moser, and many others They established the non specificity of the various gastro intestinal diseases, and gave to us a wide knowledge of the untold microbic hordes, regular, accidental or pathogenic occupants of the alimentary tract

These scientists likewise confirmed the interdependence of bio chemic operations and the relations of these germs to the several diarrheal disorders and give to us a reasonable basis for the following postulate indigestion, slight to severe gastro intestinal catarrh, and even a foudroyant attack of cholera infantum may be primarily ascribed to an intoxication; this intoxication being caused by an absorption (little or much, slow or rapid) of toxic, tissue and bacterial products, elaborated without or within the body. Intestinal lesions ensuing, the microbic horde, led by such germs as the bacterium coli commune, bacterium lactis aerogenes, staphylococcus pyogenes, streptococcus pyogenes, pneumococcus and others, invade the blood and give rise to general systemic or localized infection, a fulminate or insidious septicemia. Thus also can we secondarily account for pneumonia, meningitis, encephalitis, nephritis, etc, of intestinal genesis

An accumulation in the food, and concentration in the gut of saprophytes and their toxins explain the inception of a gastro enteritis, the continuance of which maintains the irritation of an exceedingly susceptible mucous membrane and its nervous director, the coliac plexus

The unstable abdominal brain that presides over an enormous circulatory territory succumbs to the saprogenic poison Consequently neither specific nor pathogenic intermediary need be concerned in an attack of cholera infantum From the fact, however, that the latter includes a number of morbid entities, it might at another time be the result of an overwhelming septicemia instead of toxemia On the other hand, chronic enterocolitis and pedatrophy might arise from sluggishly acting germs associated with slow, prolonged, poisonous absorption It has recently been shown that acute enterocolitis results from the invasion of the blood by numerous germs that have been hitherto considered specific only to certain other processes

A Rodet and G Roux in 1892, differentiated between the infectious and poisonous properties of the bacterium coli commune It and the bacterium lactis aerogenes had been acknowledged harmless intestinal tenants The former's pathogenic and pyogenic attributes were now recognized as well as its areas of invasion, viz, serous surfaces, skin, glands, respiratory and urinary organs It is thus the admitted disease inciter of such sundry conditions as enterocolitis, pneumonia, meningitis, encephalitis, phlegmon, peritonitis, etc Its clinical, pathologic and biologic resemblance to the typhoid bacillus is being carefully considered

Fraenkel tells us that, "pathogenesis is the most inconstant thing in the character of many species of bacteria" Fraenkel's pneumococcus, often a most virulent inflammatory exciter, is likewise a regular tenant of health salivary and nasal secretions as are the pus germs and Loffler's bacillus

A P Ohlmacher in the *New York Medical Journal* April 27, reports finding the diphtheria bacillus in a pneumonic lung in which the diplococcus of pneumonia was absent The diplococcus was obtained, however, in cultures made from the pus in the meninges of the same patient Future research will probably throw light upon the curious analogies and associations of these microorganisms and their more definite relations to such diverse disease manifestations Much work in this direction has, however, been accomplished in the study of infantile diarrhea The non-specificity of this affection has been proved, as has also its general toxemic and septicemic origin

Sévestré as early as 1887 said "A general infection, especially a condition of pulmonary congestion and broncho-pneumonia, may develop, secondary to fetid diarrhea and infectious enteritis" Under his supervision, Gaston and Renard, by capillary puncture of pneumonic lungs during the life of children suffering from enterocolitis, secured therefrom and from the stools of the same patients, pure cultures of the staphylococcus, pneumococcus and bacterium coli commune and other microbes Their control experiments upon animals demonstrated that these germs entered the general circulation through the intestinal lymphatics and lodged in the first filter, the lungs

Rossi Doria publishes an epidemic of diarrhea due to the bacterium coli commune, that remaining *in loco* caused acute enterocolitis, that entering the circulation caused a systemic typhoid-like infection as proven by the pathologico-anatomic findings

Czerny and Moser recognizing the general infectious character of infantile diarrhea, and traced its source through the lymphatics into the general circulation They discovered the staphylococcus pyogenes, streptococcus pyogenes, bacterium coli commune, bacterium lactis aerogenes, and other well-known disease progenitors in the stools and circulating blood, of twelve out of fifteen babes suffering from uncomplicated enterocolitis Their work was carefully controlled by experiments upon dyspeptics, healthy children and animals Their pathologic findings in the lungs and kidneys corroborated their bacteriologic and microscopic work All these careful observations but emphasize the dictum as to a general nonspecific systemic infection in acute gastro enteritis The slighter and earlier intestinal disturbances are of toxemic origin and due to milk fermentation and contamination Chronic enterocolitis is the result of a slower, more insidious poison or sepsis Cholera infantum is either or both an overwhelming toxemia or septicemia Associated conditions, or the so-called secondary complications are of clearly septicemic or pyemic character, in which not one but several different germs play an important rôle Dyspepsia, acute and chronic enterocolitis, cholera infantum, may be but different and various degrees of toxemia and septicemia dependent upon numberless and manifold saprophytic, pathogenic microorganisms

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3353 Indiana Avenue

COLITIS IN INFANCY AND CHILDHOOD

Read in the Section on Diseases of Children, at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md, May 7-10 1895

BY EDWARD ANDERSON, M D

ROCKVILLE MD

Colitis, in the adult, often occurs as a primary disease, but this is rarely the case in infancy At an early age it usually begins as an enteritis and is most always caused by indigestible substances irritating and obstructing the small intestine Bottle-fed infants are particularly prone to this disease and I believe that most of those who die, waste away from its effects

Intussusception is spoken of, as of frequent occurrence in connection with it I have never seen it, though obstruction more or less complete, I believe, is always present Heat is an important factor in its causation, as is proved by its being confined almost exclusively to the hot months of the year A heated atmosphere not only renders the infant's bowels incapable of digestion, but also its food unfit for use, even when we can not perceive it by the taste An enteritis sometimes runs into a colitis, but the former is generally converted into the latter by treatment with opiates and astringents A child that is deriving its sustenance from a healthy mother, when attacked by inflammatory diarrhea from being overheated or from any other cause, can generally be relieved at once by the administration of tincture of opium, bismuth and chalk mixture, but not so the bottle-fed infant It usually goes on from bad to worse under this same treatment, as does also the child beyond the nursing period

I will not detain you with a lengthy discourse on the origin, symptoms and progress of this disease, with which you are familiar, but will cite three cases which I hope will prove of interest

July 3, last, I was called to see a little three months old female child, in a family I had always attended The parents had three other children, all of whom had been nurtured at the mother's breast, and when attacked by diarrhea were almost immediately restored to heath by the administration of opium, bismuth and chalk mixture, but not so this youngest, who was being raised artificially The parents had become familiar with my prescription, as persons too often do, and had treated their older children successfully with it, but this youngest child they had treated into a case of ulcerative colitis with the same remedies I prefer mechanical means in the treatment of disease, wherever they can be employed, so I attempted to use the syringe in this case but failed It required some force to introduce the nozzle of the syringe and the water was thrown back as rapidly as injected Had I persisted, the only question would have been which was the stronger, the bowel or the syringe Having failed with everything else, I took a pill containing 2 grains of blue mass and half a grain of opium, that I always carry for adult cases, and divided it into twenty pills, ordering one such pill to be given every four hours I continued this treatment for two weeks by which time improvement was so great that the amount was reduced to three pills a day and enemas could be satisfactorily employed When first called to see the child it was being fed on condensed milk which was changed for a more laxative diet, cow's milk with dextrine At the end of a month this child was perfectly well and is now one of the most robust children I know

From former experience I feel convinced that had this little patient been treated in any other way it would have wasted and died

On Aug 10, 1894, I was called to see a male child five months old, suffering from ulcerative colitis This child had been treated by another physician for two months and was gradually getting worse all the time A sister at the same age had died a year before affected in the same way I was put in charge of the case and treated it in the same way as I did the last, except that instead of directing the blue mass and opium pill to be divided into twenty parts, I divided them into ten, giving a fifth of a grain of blue mass and a twentieth of opium every four hours After two weeks, fecal matter began to descend freely, when I ordered a syringe to be used after every action that was not perfectly satisfactory At the end of a month this child was well and has remained so since

About June 20, 1894, a little 5 year old son of a Rockville druggist was attacked by inflammation of the bowels, the nature of which I could not clearly determine as he was attended by another physician of this place who had been their family physician before I settled in Rockville He treated the case until July 18, when I was called in consultation I not only met the attending physician but a prominent physician from Washington also Another physician of at least thirty years' experience had been in consultation but I did not meet him until later on I found the child a mere shell, lying on his back and unable to move He could not have turned on his side if a red-hot iron had been thrust in his face When I entered the front door the house had the odor of a dissecting room, although the sick boy was upstairs The mother said he had had but one action that day, which I requested them to let me see, and found it nothing but necrosed tissue The father, who is one of the most intelligent and best informed men I ever knew, said not a particle of fecal matter had been passed for ten days The attending physician never expressed an opinion in regard to the case, at least in my presence, but the consultants were of opinion that intussusception was present and rather favored the treatment then being employed that by opium, bismuth and tannic acid, although the child was dying under its use They did not speak decidedly as to what should be done with the little patient, but were opposed to my plan of treatment, which was to give a grain of blue mass and one fourth of a grain opium every four hours until the child improved sufficiently to have the number of doses reduced, and then employ enemas The consultant whom I met July 18 said he would be afraid to try an enema at that time, for fear the bowel would burst, as he believed that in many places there was nothing left of the colon but its peritoneal coat I saw no more of this case until July 23, when I received a note from the child's father, asking me to take entire charge of the case, as he believed I was the only one who could save his boy He notified the attending physician to that effect

I had been giving my patient a grain of blue mass with one fourth of a grain of opium every four hours for three days when the second consultant came up He considered my treatment heroic, but said as the child would die anyhow, I was justified in trying it, but he would advise me not to keep it up for more than three days I continued it for two weeks with improvement from the very first I then stopped it for three days, when I was obliged to resume it on account of retrogression I kept it up until September 18, when the boy was able to walk and eat solid food This patient was fed with milk and dextrine mixed together and with extract of malt, and I allowed him to chew as much beef, mutton and chicken as he wanted and swallow the juice There was so much weakness present that two teaspoonfuls of whisky and a drop of fluid extract of digitalis had to be given every four hours, also one-sixtieth of a grain of strychnia three times daily to prevent sinking

When I first saw the child he could take no nourishment, even a tablespoonful of milk had to be forced down his throat Blue mass, on account of its sweet taste, is very easily administered to children, and can be dissolved in a few drops of water In using this treatment in cases such as I have described, we should not restrict ourselves to a day, week or month, but give it until the patient is well, for it never produces constitutional effects in dysentery except in tuberculous individuals, and with them it should never be employed It used to be thought and is now generally supposed that no one is as sound after a severe attack of dysentery as he was before, but I have never treated a case by the prolonged use of mercury where the health was not improved thereby except in tuberculous subjects Why the mercury produces no constitutional effect I am unable to say, for it certainly enters the circulation, or it would not act on the kidneys as it does In no other disease can it be given with such impunity To sum up all I have to say, in regard to the treatment of this disease from which so many infants, and especially bottle fed infants, slowly pass away and from which few, if any, should die the child should be put on a nourishing liquid diet, which should be laxative in character, the colon should be irrigated with warm water from a fountain syringe as soon as the inflammation of that viscus has sufficiently subsided to retain it, blue mass and opium should be administered in doses suitable to the age of the patient, until all irritating and obstructing substances are removed from the intestines and their natural function is restored In this way, mercury, the best of antiseptics, will be kept continually pouring over the diseased coat or coats of the bowel during the process of repair

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Diuretic Action of Calomel —Dr Finkelstein at Charkoff, Russia, summarizes his experience as follows 1, calomel is an excellent diuretic and especially useful in cardiac dropsy, 2 the prognosis is less favorable in aortic disease, 3, the action is greater in the absence of renal complications (except suggestion), 4, the dosage must be guarded (maximum 12 gm every two hours), the first symptoms of mercurial poisoning must be closely heeded, 5, in case of a weak heart, a combination of calomel and digitalis is recommended (℞ calomel 12-13 gm., pulv fol digitalis 02-30 gm S Dose, four times a day), 6, the effects of calomel are continued longer than in the case of other similar remedies —*Therapeutische Wochenschrift*, July 25, 1895

PSEUDO-MEMBRANOUS ENTERITIS ASSOCIATED WITH ASCARES LUMBRICOIDES

Read in the Section on Diseases of Children, at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md , May 7-10, 1895

BY IRVING M SNOW, M D

INSTRUCTOR IN DISEASES OF CHILDREN, UNIVERSITY OF BUFFALO, PHYSICIAN TO BUFFALO FRESH AIR MISSION HOSPITAL ETC

BUFFALO, N Y

(SYNOPSIS)

This case of pseudo-membranous enteritis occurred in a girl of 2½ years During the summer of 1894 she suffered from a severe attack of whooping cough, followed by ileo-colitis lasting six weeks In the most acute stage of the diarrhea she began to pass pieces of membrane and tubular casts of the bowels, six weeks later, the membranes being daily present in the feces, several round worms were evacuated, after which no more membrane appeared in the stools for four and one-half months, when, coincident with an attack of grippe-bronchitis, bits of membrane and two ascarides were passed for two days No recurrence of the membrane casts since

On Sept 27, 1894, a little German girl aged 2½ years was brought to me with the following history father dead of sarcoma of the rectum, mother and one sister living The patient was born after a normal labor and reared on condensed milk During dentition she frequently suffered from bronchitis, five or six attacks in all In June 1894, she was quite ill from vaccination After the vaccine fever she was attacked by pertussis and was harassed by a frequent paroxysmal cough in July and August In August the whooping cough was further complicated by an inflammatory diarrhea The acute stage of the ileo-colitis lasted three weeks there being ten or eleven stools of blood and mucus daily The mother watched the discharges with anxiety, having recently nursed her husband, who died of malignant disease of the bowels On August 25, the diarrhea being at its height, she observed, mixed with the passage, bits of membrane and a long ribbon-like whitish substance This she separated from the blood and feces by pouring water over it The mass filled one-half of a 6 oz vial, it was twelve inches long, the surface was honeycombed with small apertures Its shape was like a narrow piece of cloth It formed a tube in which a finger could be introduced and around which it fitted like a glove

From this time the diarrhea gradually subsided and the child slowly gained in health, yet from August 25 to September 27, thirty-four days, each day the feces were mixed with tubular casts and bits of membrane Some days there were membranous tubes, at other times only pieces of membrane Blood was occasionally present in the evacuations until September 20 The passage of the stools and membrane was accompanied by no pain or colic either before, during, or after defecation

Such was the history of the case up to the time of my examination

September 27 my patient was a strong, ruddy, well-grown little girl of placid temperament The tongue was clean, appetite good, sleep natural The child was on adult diet There was no abnormal tenderness, nor was anything abnormal found in chest, abdomen or urinary organs The stools numbered two a day, were of the consistency and color of mustard and contained no undigested food The membranous cast passed that morning was shown to me It was tubular in form, fitted closely about my little finger, whitish in color, thin, glistening, transparent in texture, three inches long, one third inch in diameter It had kept its shape in alcohol for two hours, and did not tear easily I made no chemic or microscopic examination, expecting to have another specimen to examine, which was not the case

I prescribed cod-liver oil, an out-of-door life, generous diet, and directed the patient to be brought to me in a few days On October 1 the mother related to me that the quantity of membrane passed was much smaller, being only seen the first two days after my prescription On October 9, the mother reported that the day before the girl had passed a piece of membrane, and that just before she came to my office she had passed a round worm, the first the child had ever had One or two passages a day, patient's weight twenty-seven pounds

As all descriptions of membranous enteritis state that shreds of membrane may be mistaken for worms, I advised the mother to continue the cod-liver oil, and to closely examine each stool The girl continued in good health, albeit somewhat feverish on October 17 A week later, to decide as to the presence of worms, I administered calomel and santonin As a result of this medication two ascarides ten and six and three-fourths inches long were evacuated, but no membrane Two days later, after more santonin and calomel, two more round worms, eleven and six inches, were discharged No membrane The medication proved quite severe, for after it the child was weak, exhausted and feverish

From the last of October until February 15 the child was in superb health, but in the middle of February she was attacked with grippe and bronchitis, being ill three weeks On March 3 a laxative produced loose stools which for two days contained bits of membrane, but no mucous cylinders March 6 to 7, two large lumbricoid worms were passed after doses of calomel and santonin The repetition of the anthelmintic brought away no more

From the last date, until now, the child has continued in good condition, neither mucous cylinders nor ascarides have been observed in the feces

It is to be noted that the discharge of casts and membrane practically ceased in October, the depression of health in February caused the exudation of only minute pieces of membrane You will note that no elaborate chemic or microscopic examination is presented There was no opportunity to do so as the membrane in the feces stopped abruptly, possibly from the tonic effect of the cod-liver oil. Nevertheless the composition of such tubular casts of the intestine is well known They are generally formed by mucin exuded from the muciparous glands of the intestine, the glands of Lieberkuhn Although many learned authorities deny the fact, it is certain that the casts may contain fibrin as well as mucin Their place of origin is generally the colon, rarely the small intestine

The interesting features of the case are

1 Membranous enteritis is rare in children, nearly all cases being recorded as occurring in women of hysterical neurotic temperament Of 111 cases recorded up to 1894, only 6 were reported in children under 10 years

2 The clinical history of the case is unusual In the descriptions of membranous enteritis, the passage of the tubular exudation casts is said to be painful, being preceded by malaise, abdominal colic and tenderness, accompanied by pain and tenesmus and followed by constitutional disturbance In my case the condition was the sequel of an acute ulcerative ileo-colitis, the exudation casts appeared in the stools, mixed with blood and mucus, at the height of the acute infectious process They were continually present during the subsidence and after the termination of the malady Thus they were daily evacuated while the child was rapidly gaining strength Four months later during a grippe-bronchitis a few bits of membrane were passed Nor did their discharge cause the child any more discomfort than the passage of a normal stool Neither colic, tenesmus, nor abdominal tenderness could be traced to their presence.

3 The relationship of the ascarides to the casts is obscure Undoubtedly the parasite found lodging in the child during the depression of health from the colitis It is possible that the mechanical irritation of the worm may have caused the exudation of mucus Yet the habitat of the ascares lumbricoides is in the small intestine, while the exudation casts judging from their caliber originated in the colon, nevertheless round intestinal worms are commonly seen in young children, while membranous enteritis is excessively rare in early life As round worms were undoubtedly present in the intestines two or three months after the tubular casts had disappeared, it is the opinion of the author that the association was accidental Whether the condition is a phase of mucous disease the author will leave for discussion.

Loos describes a similar case in an article in the *Prag Med Wochenschrift*, 1889

" A 2 year old boy, previously in perfect health, was taken suddenly ill He cried the whole night with abdominal pain, and finally voided a single stool, which contained a peculiar substance An examination showed it to be a tube 18 centimeters long and 4 centimeters wide It was composed of fibers, some running parallel with the length, others branching in various directions These fibers were connected by a glistening homogenous membrane The whole was enveloped by cloudy membrane The tissue was concentrically built and held in its substance pigment, eggs of oxyuris, intestinal epithelium and *debris* of food, chemically, mucin and fibrin were present The membrane continued to be present in the stools ten days, the general condition remaining good Fourteen days later, there was discharge of a large number of ascarides Rudolph von Jaksch finds the process to be a periodical exudation of mucus which causes the colic The condition is analogous to chronic bronchial catarrh "

SULPHATE OF MAGNESIUM IN THE SUMMER DIARRHEA OF CHILDREN

Read in the Section on Diseases of Children at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY STUART PATTERSON, M D

PITTSBURG, PA

The use of magnesium sulphate in the treatment of cholera æstiva is not new, particularly in the rural districts

It is unnecessary to go into detail as to the history, symptomatology, etc , therefore I shall merely review the conditions present and the indications for treatment As yet, no specific cause has been found, but we can almost certainly conclude that there " are fermentative and septic processes in the contents of the stomach and intestines, and these followed by production of large quantities of lactic and fatty acids "[1]

According to Escherich, Baginsky, Booker, Vaughan, Lesage and others, these changes are most probably brought about by microorganisms gaining entrance into the alimentary canal with the food

The following are the reasons for the belief in the specific origin of the disease

1 It is one occurring for the most part in epidemic form during the summer months, a time when fermentative processes are most common Or, if it does occur in winter, it is almost invariably found in close, ill-ventilated, and crowded quarters (Epstein)

2 The majority of those attacked are the offspring of the poorer classes, who have both insufficient and unwholesome food, and this brings about an ill-nourished and consequently a weakened condition of the organism, which furnishes a proper nidus for the growth and development of fermentative fungi

In many of the cases of this report, the mothers were women who could only nurse their children morning and evening, while for the rest of the day the little ones were left to the tender mercies of careless and ignorant brothers and sisters

3 In the great majority of these cases, except those seen during the first twelve to twenty-four hours of the disease, the discharges from the bowels were acid It has been found that fermentative fungi are present in vast numbers in all the stools, but are *especially* numerous in those having an acid reaction (Nothnagel)

Henoch, vol II, p 42, in the absence of a recognized specfic cause, explains the primary process as " an abnormal chemic action in the contents of the stomach and intestines, set up by unknown influences, and not merely a catarrhal process, although on microscopic examination, proliferation of round cells has been found under the mucous membrane " This can be and is produced, if the process goes on for several days, by the irritating contents of the intestines

The cause, whatever it may be, finds its way into the stomach and intestines, in all likelihood, through the ingested food and water The indications for the treatment are to remove the cause if known, and prophylaxis To meet the first, magnesium sulphate seems to me to be, theoretically at least, the ideal remedy As to its practical utility, this report will speak for itself To meet the second indication, sterilize the food

The administration of sulphate of magnesium calls forth a profuse secretion from the intestinal glands The remedy is a powerful alkali It stimulates peristalsis, either directly or indirectly, through the quantity of secretion poured out or by producing a free flow of bile—one of the natural stimulants to peristalsis

Thus we have a remedy which, 1, corrects the irritating properties of the contents of the stomach and intestines by rendering them alkalin , 2, stimulates the glands to a more profuse secretion, thereby unloading a congested mucous membrane and possibly washing out the products of fermentation , 3, flushing the entire bowel, thereby removing the fermenting mass

In the first series of twenty-five selected cases treated during August, 1892, at the Pittsburg Free Dispensary, which I report, the symptoms were those usually found in the disease under discussion, namely, vomiting, diarrhea—ranging from the " chopped spinach " stools, mixed with mucus and streaked with blood, to the rice water discharges—coated tongue, restlessness and general prostration, etc

The ages ranged from 1 to 6 years The dose and mode of administration of the remedy were as follows the mother was directed to give to a child 1 year old an even teaspoonful (about 1 drachm) of sulphate of magnesium, sufficiently moistened to swallow, as soon as she arrived home , the process to be repeated in the morning and the child brought back to me at 3 o'clock P M on that day, that being the hour of my service at the dispensary

This procedure was repeated daily at the same hours until the discharges become yellow For the older children, the dose ranged from a heaping teaspoonful (about 2 drachms) to a tablespoonful (about 4 drachms)

As the result of the exhibition of these doses, the mothers reported the children relieved of pain and restlessness, with the induction of quiet sleep No difficulty, except in a few cases, was experienced in the administration of the remedy on account of its objectionable taste The after-treatment consisted of general tonics

Report of the duration of the disease, first series one case, nineteen days , one case, five days , two cases, four days , seventeen cases, three days , four cases, two days

In the second series of fifty-five cases, treated during 1893 and 1894, the results were slightly different Ages 6 months to 9 years two cases died , four cases, fourteen days , six cases, seven days , twenty-three cases, five days , thirteen cases, three days , seven did not report after the first day

In the cases lasting over one week, the children suffered relapses and several were sent to the Children's Hospital The other cases all did well, and I saw them thriving under a properly regulated diet and tonics I should add that in the latter series I gave guaiacol for several days after the stools became normal The tonics were selected according to the necessities of each case Those most frequently used were syrup of iodid of iron, cod-liver oil, compound syrup hypophosphites, strychnin, quinin, pyrophosphate of iron, etc

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[1] Henoch, vol i page 128

This list includes all the cases that were selected for trial by this remedy, and the practically uniformly beneficial results obtained in the treatment of this so often intractable disease have led me to give you the benefit of my experience

DISCUSSION ON PAPERS OF DRS ENGELMAN, ANDERSON, SNOW AND PATTERSON

DR KOPLIK—Taking up the paper of Dr Engelman, of Chicago, I might say that most of us have met those cases in which there is the presence of toxemic and septicemic symptoms The prognoses given in those cases are generally faulty, but lately I have seen some of them cured, even though the pneumonia lasts a fortnight This is due directly, as we suppose, to microbic influences from the gut

Now as to the treatment of some of these cases of diarrhea in children One of the gentlemen here to-day spoke of calomel, and the other spoke of magnesium sulphate Both of the ideas are the same, but I think in acute intestinal catarrh, and especially in that form called cholera infantum, we should be careful in the use of mercury in any form In acute gastro enteritis in infancy, and in young childhood, we have to deal with the sensitiveness of the kidneys, for instance We have to contend with cases where it is likely the use of mercury in any form will cause death As to magnesium sulphate, it answers the same purpose, and it is better than castor oil, or any like remedies which we are accustomed to use in the beginning of the treatment of those diseases It is scientific and proper to try to clean out of the bowels that which is injurious, as well as that which is toxemic and septicemic We should first recollect that most of these cases are due to some error in the diet, either bad food or good food improperly prepared So that the first thing in all these cases after you have begun the medicinal treatment is to stop all diet, diet which requires any amount of effort on the part of the intestines, such as milk In my practice, that is the first thing to think of It has been said in rebuttal, whenever I have mentioned this fact, that the child would starve You would be surprised how long a child can live upon a simple mixture of the white of an egg and water I think the only safety of the child lies in starving it at the outset, and in the beginning of the treatment we should direct our attention to the diet and stop it, and afterward gradually return to it

The medicinal treatment in acute gastro-enteritis has been very unsatisfactory I use little medicine in the treatment of acute and chronic gastro enteritis, and I can assure the Section that I see about as many such cases as are seen in any hospital I use very few drugs, probably a little resorcin, and probably a good deal of bismuth I might say that I consider bismuth a sort of standby It is a mild intestinal tonic

DR W D BOOKER, of Baltimore—In considering the etiology of infantile summer diarrhea, it is important to think of something beside bacteria as the cause We have the bacteria operative in the winter time, and the same bacteria may be found in the intestines of infants in winter as well as summer There must be a predisposing cause operating therefore by which the microorganisms are brought forth What that secondary cause may be, we are not so well informed It is possible that the direct effect is the prostrating of the digestive powers of the infant, and probably the weakening of the cells of the intestines themselves There must be then, beside the bacteria entering into the etiology of summer diarrhea, many conditions that we do not understand Now, the question is, in what way must we consider first the action of the bacteria before they enter the body, second, the action of the bacteria after they have entered the body In summer time the bacteria multiply much more rapidly than in the cold of winter, and they cause much more serious effects in summer than in winter Milk especially, which is the food of the child, is very favorable to the growth and activity of bacteria But a short time in summer is sufficient to permit very serious changes in the milk, and poisonous qualities to be introduced by the microörganisms, unless something happens to the intestines before the bacteria get in As soon as these cells are injured in any way the bacteria have an opportunity of getting in their work Beside the heat itself, we have to contend with the improper food I do not mean the food that is made improper by the bacteria, but rather the imprudent feeding of the child with food that is entirely unsuited for its digestion, such as green potatoes, strawberries and the early vegetables In nearly every case we are called upon to treat, we first inquire as to the origin of the disease and get the answer that there has been some imprudence in the matter of diet If we keep off this meddling in the diet the resistance of the cells is preserved, or their entirety preserved, and their resisting qualities are sufficient to beat off the bacteria After this lesion is once established, it is easy for the bacteria to do their work, and this they do as has been outlined in the paper read here in two ways, one by the production of poisonous properties in the intestines, which are absorbed and taken up in the various parts of the body, and the lesions made by these poisons are similar to what we get in diseases like diphtheria Again, this poison, which is produced by the bacteria in the intestines, may also act directly on the tissues, and we get lesions which show the various stages of the bacteria in their direct effect As the bacteria spread we have produced superficial ulceration The bacteria become more and more numerous and the process extends to a deeper ulceration, which may pass down as far as the external muscular coat There is no difficulty, in some cases, in tracing bacteria along this line, first through the superficial layer that has been broken, and so on Where we trace this bacteria, we find the separative processes going on

Now, what are the forms of the bacteria that we find in summer diarrhea? Investigations which I have made for the past few years on this subject have led me to the belief that we find the same bacteria that we find every day There is nothing specific in the nature of these organisms, and the nature of the disease is so variable that there is no classification found in one text-book that will correspond with that found in another In classifying the cases from the contents of the rectum, I have made classifications in about eighty cases, according to the various forms of the bacteria, and not with regard to the clinical condition of the patient It is interesting to see how this classification runs The first classification consists of the cases which show decided toxism. They have not developed any serious inflammatory changes in the intestines to be traced by any condition in the stools, but the child shows drowsiness and much nervousness. These cases are generally more or less serious

The next class is twenty or thirty cases in which the streptococci prevail Nearly all these cases show inflammatory changes in the cells in the mucus and feces These cases are generally more serious because of complications by other lesions Not only the complication from the absorption of the toxin particles, but also the invasion of these organs by the bacteria themselves This secondary infection is more apt to follow in cases in which the streptococci is found There are few cases in which the micrococci alone is seen

In regard to the treatment of summer diarrhea, I think the most important consideration is dietary and not medicinal There are very few medicines that we can rely upon, and I was very sorry to hear Dr Koplik speak against one that I have always thought wise to use The first thing to do, as Dr Koplik said, is to stop everything at the time the sickness occurs If it be milk or any other food that was being taken, at the time the child became sick, stop it at once I think this is better done by substituting rice water or oatmeal water for the milk, and to give some purgative I have for years used calomel, and have not seen any bad results from it Of all the drugs in the Pharmacopœia, in cases like this, calomel is the one I use It acts not only by relieving the stomach of its contents, but there is an action of the calomel upon the mucous membranes generally that we do not understand It is my belief that this is a valuable remedy

THE CHAIRMAN—What dose of calomel do you give?

DR BOOKER—It should be given in very small doses To a child six months old, a sixth of a grain should be given every hour until a grain or more is taken Calomel acts somewhat as an antiseptic If we get rid of the fermentation, and give the child food that it will digest with the least amount of effort, and which produces the least amount of poisonous product from the bacteria, the disease can be checked very early I think in the majority of cases of summer diarrhea, if taken in the beginning and treated as to diet and if we administer purgatives in the beginning, and gradually go back to the milk, and not be in too big a hurry about it, we can carry a child on cereal water for several days without serious results If restlessness on the part of the parent should occur on account of taking the milk from the child and substituting cereal waters, then egg water is very good The white of the egg should be beaten up and allowed to stand for a few hours in a cold place Then pour the clear part off from the bottom, and a teaspoonful of this clear white of the egg can be dissolved in three or four teaspoonfuls of clear water, and be given as a substitute for the cereal waters After the disease has gone on for a week or couple of weeks, medicine does not have much effect, and diet must be the main reliance

The most important point in all the treatment is not to give too much food Do not be afraid of starvation, but give the smallest quantity that the child can digest Later on, the opiates may be necessary In certain cases nothing will relieve the restlessness and pain and frequency of stools like the opiates, but care should be used in giving them The smallest quantity should be given and no rashness exercised in this respect Bismuth is more or less disappointing We all give it because we are puzzled in these difficult cases to know what to do, but in a few cases, perhaps bismuth does give marked relief In cases that become discouraging, it is hard to find anything that is good Irrigation sometimes gives relief, but we should select the cases in which irrigation is resorted to Where there is an inflamed condition of the intestines, it is a question whether irrigation should be carried on, but if irrigation is carried on under those conditions, it is well to raise the buttocks of the child, holding the shoulders and letting the water run in by gravitation

In those cases where there is drowsiness and stupor and frequent stools with more or less fever, irrigation will often relieve all the symptoms in a few hours, but to do this irrigation thoroughly the catheter should be inserted as far as it will go—its full length—and from one to two gallons of water can be used The water is running in and out, all the time There is no danger of rupture of the gut, and a free irrigation in these cases, as a rule, relieves the symptoms I have seen the fever disappear after such an irrigation of the child, and it becomes bright and lively where previously it had been stupid

DR. RIGG, of Pennsylvania—It is my belief that there are other influences than bacteria The clearing out of the bowel and stopping of food are certainly two of the first things to be sought After that the course is not so clear I want to speak more especially of one particular type of diarrhea I believe we do not discriminate closely enough between the different types In that form of gastro-colitis where we have watery stools and vomiting, with great prostration, I know of nothing equal to nitrate of silver In my own hands, that has been the most satisfactory drug I have ever used After the food is stopped and the alimentary canal cleared out, then give a water solution, small doses of nitrate of silver often repeated I do not know why this acts as it does, other than it is astringent I think it is sometimes in that case like other cases of irritation of the mucous membrane, we get in a short time the effect of an irritation It may take quite a while to get rid of the effects If you get an irritating substance in the eye, it will produce an inflammation that will make you treat the condition at once, and not pay any attention to the cause So it is in these other cases The nitrate of silver, I do not believe has anything to do with the removal of the cause, but it has to do with the healing of the bowels and the stopping of the watery diarrhea

DR GRIFFITH, of Philadelphia—I think the heat in our cities is a great factor, not by increasing the germs inside or outside of the body, but in the general condition of the child. I can not account in any other way for the benefit that invariably follows the sending of a child into the country as soon as possible It is our custom in Philadelphia to send the mother with the child for a trip on the river, where we have a steamboat for the purpose The babes who go on these trips apparently dying, come back in a very much improved condition No change has been made in the diet, and nothing has been done except to remove the child from the excessive heat of the city So we have every reason to believe that the heat has as much to do with many of these cases as anything else

With regard to treatment, I, too, want to add my voice to those who favor starvation I think the starvation of the child, after all, is the most important thing you can do Most mothers in the dispensary class, and it is in that class we see most of these cases, are not willing to see the children starve, and on that account I advise them to give barley water, and where nourishment is required I prefer the egg water We have to remember always what we are dealing with, what the child is suffering from at the time, and what the stage of the malady probably is The large intestines of children dying from diarrhea are found to contain comparatively few germs The germs have been washed out of the small intestines, and therefore it is not right to give the child a purgative with a view of washing out the small intestines when the diarrhea has gone on long enough to wash them out As to the purgatives, whether castor oil, or magnesium, or what not, depends somewhat on the stage of the case If we think that the small bowel is comparatively empty, and the large bowel is not, that calls for certain treatment What drug we shall use, depends on the condition of the case If we feel that a large number of bacteria is present, and are doing the damage, then we might use an antiseptic, but I have little faith in intestinal antisepsis I want to add my voice to those already heard here in favor of the use of opium in these cases A few years ago the man who would advocate opium would have been called a know-nothing I think now that many believe opium must be the standby in the future If we are sure, from giving no food, that the bacteria will have no longer anything to live on, and that we have emptied the intestinal canal, we see very clearly that we have to do with something that is acting from the inside, and our remedies then must be directed to the treatment on the inside, and in those cases where a child is suffering evidently from frequent and profuse passages, opium will do work that no other drug will do

I do not want it to be understood that I advocate a routine treatment with opium A few years ago I made experiments in the Children's Hospital with different drugs in the treatment of summer diarrhea, putting some children on starvation, and some on bismuth, and nothing else, and giving some opium and nothing else I found that those that had the starvation treatment did as well as any of those that had no drug but opium

DR WEAVER—It seems to me that in private practice it is impossible to give magnesium on account of the disagreeable taste I do not see how in ordinary practice it is possible to administer magnesium I know it is impossible for me to use this medicine with any degree of utility We have remedies that are more palatable, and except where you want to experiment for the sake of seeing the effect of the medicine, it seems to me it is unnecessary to use a remedy like magnesium

I approve entirely of the treatment which has been so well outlined by the gentleman from Baltimore, and the gentleman from Philadelphia, and in the end I think it will prove better than anything else I agree with them that the best method is the elimination of every offensive particle from the bowel, and the taking away of food I am in the habit, in those severe cases, of putting the child on a diet of hot water slightly sweetened I find that the child likes it very well After feeding a child last summer on hot water sweetened, I found when I wanted to return to the milk, that the child refused to take it It had learned to like the sweetened water I am very sure that the hot water had a great deal to do with the effectiveness of the treatment Calomel I have great faith in, and I think we are on the right path when we use it to clear the alimentary canal I think opiates necessary I use morphia with 1-150 of atropia

DR FISCHER—Dr Neumann, after making an extensive study of this subject in Germany last summer, said that the routine method of treating was first to sterilize the intestinal tract and then sterilize the food Beside washing the stomach, the bowel was irrigated by raising the child and allowing the warm water to flow by gravity as high up as possible At any rate his plan was to wash the stomach and rectum with a saline solution, and he said that if the child's pulse was very weak and the diarrhea severe, in addition to washing they use this hypodermic clysis in whatever quantity necessary to flow under the skin I have used this hypodermic clysis several times, but only in these true forms of cholera infantum as we see them in New York, and have found them beneficial

I should like to come back to what Dr Griffith has said in regard to taking children away from the heat of the city, putting them on boats and sending them on the water I should like to emphasize that more strongly than Dr Griffith has We all know that salt water is binding Passengers on the ocean complain of the constipating influences of the sea trip, and therefore the child not only has the benefit of the fresh air, on one of these boat-trips, but also has the benefit of the constipating influence of the salt air

There is one drug that I have seen used abroad with good success After the intestinal tract has been sterilized, and after the administration of the castor oil or magnesium, and whatever it may be, the drug that is giving the most satisfactory effect abroad is beta-naphthole bismuth It is an ordinary bismuth combined with naphthole It is not poisonous, is very well taken by the child, and I have found that it produced good results in those cases where I have used it

Dr S S Adams, of Washington—My experience has taught me that a great deal can be done simply by removing the child from the heat of the city This was impressed upon me more forcibly last summer than ever before From June 8, until the middle of September, we had in Washington almost continuously a temperature above 80, with its usual ill effects upon infantile life During this period I was attending the little ones in the Foundling Hospital We removed the children from the commodious quarters of the city to a suburban place in what is called the National Park Although this tract has been bought by the Government, it has not been improved yet, and a large house, occupying quite an elevation, with a stream of water running through the place was the new home for the little ones, It was a most favorable locality and the best that could be selected for the purpose Unfortunately, however, the children were so closely packed together in this farm house, that there was hardly 300 cubic feet for each child I had ample opportunity for making examinations, and was surprised at certain things which these examinations developed Fifty per cent of the children removed to this place died, and of that number the largest number of stools passed by any in twenty-four hours, was ten This was a very small number in cases ending with such fatal consequences The average number of stools in the children who died was six There were no intestinal lesions in those who died The conclusion that must be arrived at in such cases is that these ill effects were due to heat In spite of the elevation of the place, the temperature, night and day, ranged from 85 to 90, when there was a free circulation of air It is just possible that at some time during this period there was contamination from a sewer that emptied above The city water, however, was in use there all the time I believe a great number of deaths were due to the excessive heat I visited the institution in the morning and got the history of each child's night The next day I would probably be told that that the child had during the night a couple of stools, and they would be exhibited to me They would show some caseine, and there were evidences of some intestinal disturbance It was not unusual for the messenger to come to my office later in the day, and inform me that the child was dead Of course these things were not easily reconciled to my mind I had heard from gentlemen who are connected with institutions having from 900 to 1,000 foundlings and young children, that such cases were not rare, but personally I had no such experience These cases were treated upon the principles laid down by Drs Booker and Griffith I must agree with those gentlemen that a great mistake is made in not drawing the line between irrigation and injection Some inject instead of irrigate If you do not provide for the return current, you will not get the beneficial effects that you expect In this connection, I will relate an incident On June 22, last, I saw a child with gastrocolitis It was an aggravated case, and had convulsions I think he was 27 months old He lay in a state of coma for several days, and finally, I came to the conclusion that he would die if not taken away The child was kept alive from Thursday to the following Monday with brandy and water Nothing else passed his lips The treatment of the rectum was tried without success He was kept alive in this condition until July 12 On that day I went to the signal office, and ascertained that another hot wave was coming, and would reach its greatest intensity on the Sunday following I at once informed the mother that there was no chance for the child to recover in the city, and that it must go away The child had had during this period from twelve to twenty bloody stools a day At 12 o'clock at night, in company with the nurse and mother, we started with the child for New York We reached the Hudson pier the next morning and took the steamer north on our way to the Catskill Mountains The mother got it into her mind that this was the only place to go That night the child had had twelve stools He was in a very low condition At this time he was being fed on chicken jelly and lamb broth Going from the elevator the temperature in the car was 110 The child was fanned and I thought he would die every minute I have heard those who said that they could count a pulse beating at 160 or 180 I can not do that When I felt this child's pulse, I could not, however, notice anything more than a flutter The child had not spoken for two weeks By the time we had reached the top of the grade and had got the benefit of the changed temperature, the child asked me if I would take him out riding When we got to the hotel he had one stool in the morning and another at 11 o'clock at night, and did not have another for forty eight hours He had no medicine whatever during all that time but whisky, and I attribute the recovery solely to the change of climate I believe that if the child had remained in Washington, he would not have survived, as the temperature the following Sunday reached 105 in the shade The child returned home in a healthy condition

I was once called up to the mountains of Maryland around Frederick, and found a child in about the same condition as the one I have referred to It had had twelve stools during the day At 10 30 at night on the top of the mountain the thermometer registered 86 outside on the porch I expressed the opinion that the child could not survive in such a temperature He was taken to Narragansett Pier, and to my surprise he never had any more bloody stools after he reached there, and he became well without any medication whatever Such cases illustrate the beneficial influence of change of climate

Dr Anderson, I think, is very fortunate in his expression I do not think that we can place much reliance upon dispensary statistics I do not believe that in the majority of dispensary cases, the traatment is carried out, as far as the diet is concerned The appeal of the child has great weight with the family, and even in our institution, I have caught people smuggling things to the children in the hospital For instance, in the case of typhoid fever, where they are warned to the contrary, we have had nurses take a can of cabbage and bacon from under the skirt and give it to a patient I agree with Dr Weaver that it is difficult to get anybody to take sulphate of magnesium I tried it once myself, but I do not want to try it again

Dr Anderson—There is no question about heat being almost exclusively the cause of these cases In the country we can not take our children to the Adirondacks, or to the Catskill Mountains, or to the springs, but we can take them from the upper story to the cellar, and often save them that way I lost a valuable member of a family I knew well, by administering a dose of chenipodium My rule is to give either calomel or blue mass Blue mass can be dissolved in a little water Mercury in certain of these severe cases is the only thing you can give You can not use irrigation in the beginning There is a spasmodic contraction of the bowels often, and in the case I mentioned the bowel had sloughed

Dr Snow—In a certain number of cases that I had charge of in a hospital, it was the reduction of temperature that seemed to be most difficult The vomiting would break after a day or two, and the number of discharges were diminished from seven or eight a day to two or three, but I still would have a high temperature to contend with—a temperature of 104 or 105 I think there is nothing better to relieve that than cold irrigation I have tried sponging the skin and other things, but in a high temperature in a diarrheal disease that is continuous, I strongly recommend cold irrigation of 80 or 85 degrees, and reducing it to 70 If the child seems to collapse under the changed temperature, it might be wrapped in blankets and stimulated hypodermically

Dr Patterson—I do not want to be understood as advocating sulphate magnesium as a cure for summer diarrhea in children The only way, in my mind, to treat these cases is to remove the cause Remove whatever is there and sterilize the food afterward Sulphate magnesium certainly does remove the contents of and empty the bowels As to removing the bacteria, or whatever is in the intestines, we often find children who have a large number of stools every day, and yet this does not remove the hard mass that we find in them and until you remove that mass the stools will continue Therefore, I think anything that will remove the irritating mass will relieve the condition You do not always get rid of the bacteria by the large number of stools

Now, in regard to the bad taste of the drug I do not know, excepting in two or three cases, that I have had any difficulty whatever in giving sulphate magnesium, and I am very sure that I never lost a case even among the most fastidious by reason of the bad taste of the drug It has not any taste in particular It is very sweet I have given it to children who were very much opposed to taking ordinary drugs—drugs of any kind in fact—with mint water, or something of that sort, and they would take it very readily

A word as to the reliability of dispensary statistics As a rule, you can educate mothers up to the advantage of carefully dieting the child The woman that Dr Adams came across in the dispensary must have been very heartless indeed I have had no trouble in the cases that came under my observation to get the mother to boil the milk, by furnishing the means for sterilizing the milk, and have had good results that way I repeat that I do not want to be understood as advocating sulphate magnesium as a cure for summer diarrhea but advocate it as a means of putting a child in the position to get well

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HAS TUBERCULOUS COW'S MILK CAUSATIVE INFLUENCE IN TUBERCULOSIS OF INFANCY?

Read in the Section on Diseases of Children at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md May 7-10 1895

BY FRANK S PARSONS, M D
EDITOR OF THE TIMES AND REGISTER
PHILADELPHIA PA

In the discussion of this subject, two questions enter into it, upon which the etiology of tuberculosis, and the degree of danger arising from the ingestion of tuberculous cow's milk, largely depend

1 Is tuberculosis *solely* dependent on the tubercle bacillus for its development?

2 Is the tubercle bacillus found in the milk of *all* tuberculous cows?

As to the first question, I believe, at the present day, it should be generally admitted that we must look beyond the simple introduction of the so called germ to the system for the production of this disease and recognize a condition that is not inherent in the healthy human organism upon which the development of tuberculosis depends

The absence of this condition precludes the possibility of infection from the germ, because of the absence of a cultivation field

The presence of this condition establishes a reason for great apprehension in regard to the ultimate outcome of the case in which it resides

What is this pre tubercular condition which forms the cultivation field of the tubercle bacillus?

We must recognize that the ingestion of tubercle bacilli does not necessarily result in tuberculosis in the human organism This fact has been proved beyond a doubt by various observers and is one which must be self-evident, inasmuch as all persons must be frequently exposed to the reception of this germ in some manner or other Hardly an autopsy is made without the proving that some time during the life of the subject, tubercles had developed, as evidenced by the cicatricial repair of the parts Cicatricial repair, we know, follows suppurative process and the latter is due to interference with circulation in the part involved In other words, there has been a loss of normal correlation in the afferent and efferent blood supply

For a more minute discussion of the influence of this loss of correlation on the production of tuberculosis, I shall be obliged, in order to prevent a great length to this paper, to refer to an article published by myself in the Philadelphia *Medical Times and Register* which runs through the first five issues of the present year, entitled a "Practical Theory and Treatment of Pulmonary Tuberculosis"

Briefly, however, I endeavored to show, in the article alluded to, that tuberculosis must be dependent on a lymphatic stasis, that said stasis arises from a backing up of waste elements in the blood at the point affected, and, that the production of excessive waste may occur from a deoxidation of blood cells, or a faulty condition of one or more of the emunctory organs, which condition may be congenital or acquired

A stasis, if present, forms a fertile field for the cultivation of the tubercle bacillus and the breaking down of the tissue involved

The curability of the lesion, and secondarily the disease, depends on the facility with which the normal correlation of the afferent and efferent blood supply can be restored in the parts affected, with a removal of the waste, and re oxidation of blood cells

If tubercle bacilli can find no lodging place in the human organism, upon which they can rest to germinate,—a state which implies perfect elimination—no deleterious effect is observed from their intrŏduction into the system

The fact that certain animals develop tuberculosis from the injection of bacilli, artificially, simply proves that such animals are susceptible to the irritating action of foreign bodies by a constitutional construction calculated to develop lymphatic stasis under the slightest provocation

Thus it may be confidently assumed that the tubercle bacillus is a secondary rather than a primary causative agent of tuberculosis

The conclusion to be reached in respect to our first question in its relation to the subject under discussion, it seems to me, must be based on the probability of the existence, or non-existence, of lymphatic stasis in the child who is fed on tuberculous milk, for instance, a child with lymphatic obstruction would undoubtedly develop tuberculosis, or the symptoms of tuberculosis so far as the tubercle bacillus determines it, if he was fed with milk in which tubercle bacilli existed, otherwise he would show no signs of such infection

The second question in our subject depends on the existence of the tubercle bacilli in the milk of tuberculous cows, and relates to the first only as the possibility arises of susceptible children being fed on milk which contains these germs

M Alexandre, in a report on the subject of tuberculosis in the stables of the Department of the Seine, France, holds that the terrible mortality from tuberculosis is not the result of the consumption of milk and flesh of our domestic animals, and that this belief should be thoroughly rooted out of the minds of the profession and laity

The danger of infecting the milk of diseased animals seems to lie in the existence of local tubercular lesion of the udder alone If this be absent, tubercle bacilli are found wanting in the milk of cows, even though they may be suffering from tuberculosis of other parts If no tubercle bacilli are found in the milk, there seems to be no evidence that there is any danger from the use of milk as food so far as the causation of tuberculosis is concerned

In conclusion, it may be stated that, from the evidence obtained up to the present time, there is nothing to show that milk from tuberculous cows is infectious, except in those cases exhibiting a pre-tubercular condition corresponding to that previously indicated, presenting a favorable cultivation ground for the tubercle bacillus, and then only from the milk of such animals as have local lesions of the udder

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SOME OF THE CAUSES OF THE GREAT MORTALITY IN INFANCY AND CHILDHOOD

Read in the Section on Diseases of Children, at the Forty-sixth Annual Meeting of the American Medical Association at Baltimore, Md., May 7-10, 1895.

BY J. A. WORK, M.D.
ELKHART, IND.

In discussing this important subject we will premise with the unquestionable proposition, viz., that in the main, physical human nature is the same the world over. Thus, conclusions derived from data from any nation, country or clime, with common environments peculiar to the subject under consideration are applicable to all. For instance, the causes that effect so great an infantile mortality in London or Paris, New York or Chicago, also exist to a greater or less degree in all large cities. The denser the massing together of human beings, the greater the multiplicity of causes of disease, and the inevitable calamitous results.

The great variety of habits and customs of a conglomerate of races and nationalities, such as in this age of rapid and cheap transit, makes it almost impossible to prevent any large city from being a fertile field for every conceivable form of disease, and the helpless infant is the easier claimed victim.

By conclusions drawn from data, necessarily incomplete, on account of the very inaccurate records, we learn that about one-half of all the deaths reported in our country, as well as elsewhere, are children under 5 years of age. If the infant comes into this physical existence a perfect being and has the proper environments, there should not be such a fearful mortality. But, alas, perfection is found in neither the infant nor its surroundings. Why is not the infant perfect physically? Answer: very few, if any parents can boast of perfect health. Thus the hereditary taint of disease, or a weakness which predisposes the infant to the numerous dangers which beset its brief life; we say brief, for the facts adduced show that one-tenth of all infants born die in the first month, one-fourth die before the first year is completed, and one-half die before the fifth year is reached. This is an alarming revelation, worthy the due consideration of Christian patriots and philanthropists. Were we to enumerate the principal causes of this dire condition, the low ebb of human vitality, we would thus record them: 1, heredity; 2, inexperience; 3, ignorance on the part of all concerned in the production and care of the infant; 4, zymotic diseases; 5, want of natural affection on the part of parents.

This list, we believe, comprises the principal causes, but probably not all; and some of these may to some individuals seem far-fetched or remote from the subject. But let us first consider heredity. The stubborn facts gleaned from observation and research will not allow us to conclude other than that myriads of infants die of hereditary taint, to say nothing of the myriads that would be born and live, were it not for this blight. Diseases transmissible are not conducive to longevity, but, on the contrary, they so violate the constitution that, if gestation is completed at all, the child by virtue of the hereditary blight can but eke out a miserable existence. This is true of all constitutional diseases, more or less. This is true to a greater degree where successive generations have been affected with any hereditary taint. Truly, "the iniquities of the fathers are visited upon the children, unto the third and fourth generations," and in a less degree where a parent with former vigorous constitution acquires the disease just prior to conception, or the hereditary effect upon the offspring may be a lack of physical development of one or more vital organs, or a weakness of the whole system without any special diseased part. Infants hereditarily affected do not all die, consequently the mortality in the succeeding generations from this too large class of diseased but often physically active beings. Sixty per cent of the mortality of children of healthy parentage could be prevented were it not for the inexperience so prevalent with the class who do not oppose reproduction.

Many parents do not even have the instinct as to feeding their young that the lower order of animals have. They do not seem to know that the infant, as a rule, brings its natural life and health-sustaining food with it, but are ready to feed it all manner of food which manufacturers have been actuated to invent from whatever motive. They know the child's stomach only as a receptacle, and are slow to learn that any food will harm the digestive apparatus, because they (the parents, or perchance the grandmother) are fond of such food. I have known well-meaning mothers to feed their babies mince pie, fried potatoes, all kinds of fruits, meats, nuts and *all* before the child had a sign of a tooth. And when the almost universal rational artificial food (cow's milk) has to be given, such kindness is bestowed that the child gets all that it wants and whenever it wants it, regardless of the impaired condition of the digestive organs. Often food is given where drink, only, is necessarily required by the fretting child. In many instances if not death, irreparable injury is produced by urging children to fill or gorge their stomachs with fresh food, while a large portion of the former meal in a decomposed condition remains. The result of a continuation of this very common habit is obvious to the pathologist.

Too little attention is given to proper clothing during infancy and childhood. Whether asleep or awake, there are always at least two indications to be observed, viz., the clothing should be of a texture to produce uniform warmth, and should be made to produce uniform pressure on all parts of the clothed surface. I have known mothers or nurses to take the babe from a warm bed of blankets and hold it in a cool atmosphere without wraps as warm as the bedding was. Many infants sleep with their parents or nurse, and are compelled to breathe the noxious exhalations of their bodies. Not a few are smothered by this unhealthful habit, and take their place in the vital statistician's list of "accidental."

I once knew a fashionable young mother to begin with the first swaddling band to lace her infant daughter, stating that she desired the child to have a "good form." Alas, before the first anniversary of birth was reached, she had gone to swell the list of deaths by "developmental diseases."

There is a factor which increases the mortality list of children to an alarming degree, which we have reasonable hope ere long, by the aid of the microscope and other inventions in the hands of the scientific investigator, to reduce to the minimum, and take its place as the least to be dreaded of all the causes of death. I refer to the zymotic diseases that play such havoc at times among our promising rising generation, blighting fond expectations.

Sanitation has done more, is doing more, and it is likely will do more to eradicate or at least modify, this dreadful class of causes of death, than can be reasonably expected in relation to other causes mentioned

Early effective elimination as advocated before this Section two years ago, in all the diseases belonging to this class, will rob it of many of its victims and thus materially reduce the mortality list (Please pardon this digression from *cause* to *cure*)

The last cause we will mention is the lack of "natural affection' The divinely inspired apostle to the Gentiles, in writing to his son in the faith (Timothy) thus declaims that in the last days perilous times shall come, and "without natural affection" is one of the morally degenerating symptoms, and we believe it also to have, as well, a physical degenerating effect How many, not *would-be* but *could-be* mothers, manifest more affection for a pug or poodle than for their own offspring? We ask a question that the observing practitioner may answer according to his own experience as a family physician What proportion of all children born are welcome or were wanted prior to conception? If I am left to answer, I will venture the assertion that not more than one-third This may be too low a guess Then think of a mother in constant rebellion during the whole time of gestation, and the effect physically, as well as morally, on the begotten, and if an effect on this, what of the next and successive generations? How many of the unwanted babies are neglected, even unto death, by the thus vicious who give their children the endearing appellation of "kids?" How many mothers in fashionable circles say that they do not want their liberties infringed upon, will not nurse their babes, and thus give them only a chance for their lives? How many carelessly prepare the food for, and as carelessly feed the little helpless creatures? How many desert their progeny? The foundling homes so mercifully provided in many of our large cities do witness of this shame, of the lack of natural affection Infant insurance will find a hearty support in this class of misanthropists

Much more could be said by way of pointing to the causes of the alarming mortality of infants, but we will content ourselves if enough has been said to elicit a proper sense of the responsibility we should feel in our chosen profession May we prove ourselves not only worthy the name Physician, but Philanthropist as well

300 Division Street

HEREDITY AND ITS ENVIRONMENTS

Read in the Section on Diseases of Children at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7 10 1895

BY J E RIGG, M.D

WILKINSBURG PA

When a child is born we may well ask what heritage it brings, from whence did it come, and what influences in the history of its ancestors would modify its condition to resist the evil influences which will surround it through life?

The late Dr Holmes said, "that if we would properly educate a child we must begin 300 years before its birth " If this be true with reference to education, is it not much more true with reference to a healthy and perfect organism being given to the child, that it may be the better able to resist diseased influences and unhealthy surroundings

The most important predisposing causes of disease are those connected with the structure of the body, having individual peculiarities, which may be inherited or may be congenital In most of the so-called hereditary diseases, that which is transmitted from parent to child is not the disease itself, nor its direct specific cause, but some peculiarity of structure of tissue or organs which, in the course of development either make the person peculiarly susceptible to diseased action from without, or produce disorders itself by defect of structure or function of some particular part

A person is said to possess immunity as regards a certain disease when he is but slowly, or not at all, affected by the causes of that disease when brought into contact with it Immunity may be natural or artificial, partial or complete Natural immunity may be hereditary, as for example, the insusceptibility of the negro to malaria and yellow fever Artificial or acquired immunity may be produced by the action of the disease itself, as in smallpox, scarlet fever, measles, whooping cough, etc , and also from smallpox by the proper vaccination with the kinepox lymph Precisely how this immunity is produced we do not know, but it is probably due to the presence of certain albuminoid substances which have the power of killing or weakening the pathogenic microorganisms or neutralizing their toxic products Immunity is rarely absolute and complete

It has been asserted that children born of syphilitic parents are protected against syphilis

Experiments on animals and observations on human beings have shown conclusively that infectious agents may pass from the mother to the fetus through the placenta, as has been observed in smallpox, measles, scarlatina, relapsing fever and syphilis

It is asserted by Baumgarten that the tubercle bacilli may be transmitted in this manner This view is not, however, generally held The generally accepted views are that the condition or predisposition to the subsequent development of tuberculosis is inherited This condition, Formad asserted to have been particularly marked in children with narrow lymph spaces

It has been claimed that heredity plays an important part in the etiology of aneurysm, chlorosis, diabetes, emphysema, goitre, gout, rheumatism and rickets

There can be no question but what the condition of the parents has something to do with the health and strength of the child, which receives its start in life from their union Lead poisoning on the part of the father is thought to lessen the vital force of the offspring

Dr Hirst has stated that out of thirty-nine pregnancies in women whose husbands were sufferers from chronic lead poisoning, eleven ended in abortion, one ended in stillbirth and only nine survived early infancy

The influence of syphilis in the parent on the fetus, and subsequently on the child, is too well known by this body of scientific men to require any argument

Drunkenness also plays an important part in the health of the future generation A man may claim that he has drank whisky all his life and is yet in a good state of preservation Such may be the case, but to see the full effect of his habit, look at his children, and we find that they will not compare favorably with those whose parents have not been given to strong drink.

In the hospital for children at Berne, Switzerland, it was found that only 45 per cent of children born of intemperate parents enjoyed good constitutions, while 82 per cent of those born of temperate parents enjoyed that blessing.

The union of two persons of the same temperament often results in children with unbalanced constitutions. That is, that particular temperament leads so strongly, that the child is overdeveloped in that particular line and does not reach the standard in others. The result is a diseased constitution. Also the union between certain nationalities seem to have in some instances an unhealthy effect. Same facts bearing on this were found by the writer while collecting statistics in Westmoreland County, Pennsylvania, in 1884. It was found in one part of that county that the early settlers had been Swedes, who were a healthy thrifty class. Near by was a community settled shortly after by the Irish, who also had a good family record. Tuberculosis was not known in either settlement. Later, perhaps in the third generation, they mingled together and a number of marriages occurred. In each case tuberculosis was found in some of its forms. A close inquiry failed to trace it back on either side. Those who married among descendants of other nations were not so afflicted.

The manner of living may have much to do with the proper nutrition of the growing cells. One instance will serve to illustrate this point. A father and mother of very good family history lived in a stone house built on a hillside, the first floor being partly under ground, and this was the part mainly used by the family. In this house they raised their family consisting of seven children. Four died before the age of 25 of tuberculosis, one at about 35 and one at 45 of the same trouble, one only living to die of cancer at the age of 50 years.

For at least three generations back the family history was good. On the one side they were of Irish descent, on the other side, I could not learn of what nation they had come.

The mental condition of the maternal parent must produce some impression on the child. How, we do not know, as so far there is no direct connection between the nervous system of the mother and the fetus, but the facts stand well established that there is some unknown force, the influence of which must be recognized. The case of Jesse Pomeroy stands not alone in support of this theory. The sieges of Lucknow and of Landau furnish additional proof of this.

As a chain is strong only at its weakest point, so we are only strong at our weakest cell.

Anything that will cause cell life to be at a low standard will, in some way or other, so weaken our forces that we will be less able to resist the influence of disease, as well as retard our growth and give us a body which will be beneath that of our neighbor who was brought into the world under less unfavorable circumstances. We must not stop when the child is born, for there are many influences which will change for better or worse the power of resistance and vital force of the physical organism of the infant with which it will have to contend in its march through life. These are most usually found in the diet which it receives and the care with which it is guarded from colds and exposure and the care that is exercised in giving it good air and plenty of sunshine.

As to heredity, it is important that each parent should exercise great care to see that they are free from any taint of disease, either inherited or acquired, and that they are not overworked physically or mentally. As to the liability of overwork physically, that is not so likely, but from a mental standpoint the reverse is true. In this age of rush and push among our American people, there is great danger of the nervous system being so exhausted by the strain of business and the desire for place that there is no power left to give vital force to the germs that are to develop into the future being.

It is the writer's belief that were it not for the introduction into our race of the slower and less nervous class that we would degenerate more rapidly than we do. This may be putting it strongly, to imply that we are in a state of degeneration, but it is surely true that we are living at too fast a pace and the laws of self-exhaustion will in time weaken and impair us to such an extent that we will no longer be able to hold our place as a nation and people.

Is it not time, then, to give the alarm? And from where is this warning to come if not from the physician? Let us give timely advice to those who intrust their health and lives in our hands. Let us not fail to look to their future good as well as their present protection. Take, for instance, a child that is born of parents who have exhausted their vital powers in their pursuit after wealth and society. Their child is given, as a heritage, a highly developed nervous system. It is raised on the bottle and its care is given to a nurse who has neither knowledge or judgment to guide her. She seeks her own comfort and not the health of the child; she allows it to be in drafts, to remain in damp clothes, to have its food whether fresh or stale. The child will suffer first from cold, then from excessive heat. What is the result? Bronchial troubles develop and carry off many, the stomach and bowels become diseased and the child lingers between life and death for a season and then slowly recovers. What is the effect of this prolonged perversion of cell nutrition? It must be to weaken the cell life of each and every cell of which the body is composed. Suppose this child be a girl. She is placed in school at an early age and is expected to accomplish by the time she is 18 as much as ought to be expected at 24; but she must be through school and enter society at 18 or, at most, 20, and what is her condition? Alas, too often so broken in health that she can only attend to her social duty and then under the stimulating lash of social rivalry. Yet she is expected to marry in a short time and give strength, force and character to her offspring, none of which she herself possesses.

How, then, are we to protect our children from the evil influences from which they suffer and for which they are in no way responsible? By prohibiting improper marriages, by teaching the proper care of the body on the part of both parents, and by limiting the amount of nerve force expended by them during the period in which their children are conceived and brought forth; by the proper care of the infant in regard to its food, clothing, rest, fresh air and clear sunshine; by guarding it from extremes of temperature, protecting it from drafts and in every way keeping it in a regular line of life, and when it comes to the proper age to go to school, to see to it that the building is well ventilated without pushing up the windows at the back of the child that air may rush in and chill the little frame already weakened by bad air and too close application to its books Then, as it grows older, especially if it be a girl, say 13 years of age, let the next two years be spent in the development of the body rather than forcing the mental training, as at this age the system needs all the nervous force and vital energy to establish the normal functions of the body We should also place our public schools under the care of intelligent and careful men and women who are competent to care for the body and mind

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BROMOFORM IN PERTUSSIS

Read in the Section on Diseases of Children at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore Md May 7-10 1895.

BY P J EATON, A M, M D (Harv)
PITTSBURG PA

I wish to bring to your attention the results of some studies I have recently made upon bromoform, its chemistry, pharmacology, and therapeutic action in certain diseases

Bromoform is a colorless liquid of sp gr 2 83 at 0 degrees C, and is represented by the symbol $CHBr_3$ It is produced by the action of bromin upon alcohol in the presence of an alkali In practice, milk of lime is saturated with bromin, alcohol is added, and the mixture distilled The resulting liquid is colorless, sweet to the taste, and gives the sensation of burning Its physiology may be summed up in saying that it is an agreeable anesthetic, without danger, merely lowering blood pressure, a narcotic when used hypodermically, and, finally, is an antipyretic The excitability of the psychomotor centers and the general reflexes are entirely abolished when anesthesia is complete The urine contains bromin some hours later

In leading up to the discussion of the value of bromoform in pertussis and certain other forms of spasmodic cough, and in referring to the methods of administration, and manner of its exhibition, I shall report briefly some cases in which the drug was used, and from these cases hope to deduce some points of interest

Cases 1 and 2—Father and son Middle aged, and 6 years old respectively Came to me Nov 12, 1893, with the history of having had whooping cough since spring They had tried many doctors and much medicine with no benefit Both pale, and pretty well worn out Gave bromoform in appropriate doses, and in ten days patients both reported themselves well

Case 3—Boy fifteen months of age Began to whoop July 25, 1894 Had not been very well for some time, having had some intestinal indigestion Began bromoform at once, drops 2 to 3, four times a day On the third day he was stupid, temperature 101.3 degrees, anorexia malaise Reduced the dose of bromoform for a day or two to 1 drop, occasionally omitting a dose Then increased it, as cough was rapidly growing worse He then took 6 drops without any bad symptoms By the middle of August he had stopped whooping, and on August 29, I have record of very rapid improvement He has had one bad cold since, during which he whooped a few times He is now, Nov 26, 1894 in robust health

Case 4—Spring of 1894, boy 3 years of age Mild case Bromoform given early In seven or eight days ceased whooping Coughed some time longer During the summer he had one or two colds, and would give a mild whoop occasionally General health suffered very little

Cases 5 and 6—Brother and sister, 8 and 10 years of age, summer of 1894, both took bromoform well, the boy recovering in ten days, the girl in two weeks The boy had a light attack, the girl a pretty severe one Both had whooped a week before having any treatment

Case 7—Middle aged gentleman, summer of 1894 He had had pertussis when a child He is father of Cases 8 and 9 Took rapidly increasing doses up to 30 drops with relief, but not complete cure He was very much racked by the paroxysms A sea trip from Boston to Baltimore, and continuance of the drug cured him within a week Coughed in all, three weeks

Cases 8 and 9—Four-year old girl and 1 year old baby Bad cases The older child would not take the medicine well and was only relieved The baby was taken to sea, and greatly benefited Bromoform was not pushed to physiologic limits in either case

Case 10—Summer of 1893, girl 4 years of age Mother would not give medicine regularly, and child did not improve She coughed all summer

Case 11—1892, boy 3 years old He whooped for a week or two before beginning treatment Was seen twice at intervals of three days Marked improvement One day at about 1 P M, his mother discovered the bottle of bromoform which had contained 1 drachm, about half empty The boy denied having taken any He was brought to my office about 2 15 P M I could smell no bromoform in his breath, and he was as bright as usual About 6 P M I was summoned by telephone and found on my arrival, that the boy in running to meet his father about 5 50 P M, had suddenly grown very sleepy and stupid, and soon had become comatose Hypodermics of ether and whisky and hot enemata were given for flagging pulse Friction to cold extremities was used, and pricking and slapping to keep patient awake In an hour he was out of danger Slept heavily during the night, and the following day was as well as usual No more bromoform was given, but the attack passed away very soon

Case 12—Summer of 1893, boy 8 years old Had been whooping hard for three weeks and was pretty well used up Made out a schedule for a week's treatment I did not see the boy again but met his mother on the street ten days afterward She said she had not brought the boy to the office as requested because he had ceased whooping at the end of five days, and was perfectly well at the time of our interview

Case 13—1893, girl about 5 years of age Gave bromoform in increasing doses up to 17 drops with relief but no very marked or prompt cure I did not dare to give any larger doses The attack lasted about four weeks A sister two years older was greatly benefited by the drug, and was well long before Case 13 Her maximum was 11 drops Both children were singularly quiet and deliberate in their actions and very phlegmatic

Case 14—June 8, 1894, male, eighteen months of age Coughed for several days Dose, 2 up to 4 drops A mild attack Well in a few days

Case 15—June 3, 1894, female 3 years of age Coughed for several days Dose, 3 up to 6 drops Moderate attack Began to diminish dose June 17 1894 Was well in two weeks

Case 16—June 12, 1894 female 25 years of age Was sick several weeks Dose 6 up to 18 drops Stopped whooping on June 22 Slowly diminished the medicine

Case 17—June 12, 1894, female 2 years of age Was sick several weeks Dose, 2 up to 4 drops Moderate attack On 23d was well of cough

Case 18—Dec 11, 1893, female sixteen months old Was sick two weeks Dose, 2 up to 4 drops Mild attack On December 23 was well

Case 19—Sept 6, 1893, female 26 years of age Coughed for a week or two Dose, 6 up to 20 drops Very severe attack By 16th much better, on 19th only one whoop Then diminished bromoform

Case 20—Sept 6, 1893, male 3 years of age Coughed for a week or two Dose, 3 up to 6 drops A moderate attack. Was well in ten days, except little loose cough

Case 21—Spring of 1894, male 8 years of age Had cough and cold for a few days Dose, 4 up to 9 drops Had rather severe attack Was well in three weeks

Case 22—Spring of 1894, female 5 years of age Had cough and cold for a few days Dose 3 up to 7 drops Mild attack Was well in two weeks

Case 23—Spring of 1894, female 6 years old Onset rather abrupt Dose, 4 up to 7 drops Mild attack Was well in ten days

Case 24—Spring of 1894, female 3 years of age Had catarrhal cold for a week Dose, 3 up to 5 drops Mild attack Was well in twelve days

Case 25—November 1894, female 6 years of age Whooped three weeks before treatment Dose, 4 up to 9 drops Severe attack Well in two weeks

Case 26—November, 1894 female 4 years of age Had whooped three weeks Dose, 3 up to 12 drops Very severe attack Was well in three weeks, and grew rapidly very fat

Case 27—November, 1894, female 2 years old Whooped for ten days Dose, 3 up to 5 drops Severe attack Well in three weeks

Case 28—November, 1894, male 2½ years of age Dose, 2 up to 4 drops Mild attack On the fifth day caught cold Temperature 104 degrees Dull, stupid, languid I stopped bromoform and gave aconite and belladonna In two days resumed bromoform Now, whooping about once in two days and sleeping and eating well, and coughing much less

Case 29—Exposed Oct 22, 1894, boy eight months old Coughed from the 20th to the 28th quite violently, and on the evening of the 28th whooped from twenty to thirty times —typically I gave 2 drops of bromoform at 8 P M, and at 1 A M Temperature normal, pulse 120 Did not whoop after 11 P M until the next day at 7 A M, two whoops, 7 30, 2 drops of bromoform Temperature and pulse normal At noon, 3 drops bromoform, at 4 P M 2 drops One whoop at 1 P M., 6 P M, temperature 99 4 degrees, pulse 120, good Much swallowed mucus in stool to-day Dull and sick—that night whooped once Slept well

October 30 No whooping to day Cough loose and very moderate Gave 5 drops of bromoform during the day Evening temperature 99 2 degrees, pulse 120

October 31, slept well Bright as usual Coughed several times—no whoop—ate well Temperature and pulse normal

November 1 Gave 1 drop of bromoform four times to-day No whoops

November 15, an occasional cough No more whoops

Shortly after last record, baby caught cold and coughed several times a day No whoops Has gained steadily since

My plan of administration is based on the following idea begin with a dose which can be well borne, increase as rapidly as is compatible with safety up to the maximum dose, *i e*, that dose which distinctly diminishes the number and violence of the whoops As the number of paroxysms decidedly lessens, and when the patient sleeps all night, I begin to diminish the dose by drops I give it four times a day as a rule, but in severe cases add an extra dose in the middle of the night I see the patients frequently, and keep close watch on the *condition of lungs, bronchi and heart* I have always exhibited bromoform in its pure state, writing for a given quantity of the drug and ordering it to be put up in a dropping bottle, and to be given in a little water, this I do because it can not be easily dropped in any other way If you bear in mind the high sp gr, you will understand why it is difficult to drop, and you will not be surprised to know that there are in the neighborhood of 360 drops in one drachm

Mr Geo W Hackney, Ph G, of Pittsburg, has made, at my instance, many experiments looking toward some other and more agreeable method of giving this drug His work seems to show that emulsions are not palatable, that mixtures are not safe, and that the best way, outside of my own way of giving it in water, is in a mixture of alcohol, glycerin and water

The first requisite seems unattainable, each mixture or solution seeming to markedly retain the sweet pungent taste of the drug The second requisite, that of safety, obtains only in absolute solutions—alcohols of various strengths

I have made it a practice to repeatedly examine the heart and lungs of all cases, and the record has been here omitted only to insure brevity In no case under observation was there any heart lesion developed, nor was there any moist râles, except in two cases These cases differed in severity, but Cases 16, 19, 21, 25, 26 were certainly very severe Case 26, for example, having, previous to treatment, lost her breakfast eight times in one morning

Since I wrote the body of this paper, Dr W W Johnston, of Washington, has, in the *Archives of Pediatrics* (April, 1895), called our attention to the great mortality in pertussis His essay deals with the shadowy side, and we are indebted to him for his exhaustive comparisons and mathematical data He deals with things as they *are* and *have been*, and not as they *may* be I do not want to precipitate a discussion on pertussis as a disease, but only to call to your attention the fact that in the use of bromoform we have a method of controlling this disease and avoiding the great mortality which surely does obtain

There is another class of cases to which I wish briefly to refer, in which bromoform seems to accomplish something unattainable in any other way I refer to those bronchial subacute colds in adults, in which a very hard, persistent, dry cough obtains, and which seem to resist the drugs ordinarily given for their amelioration In such cases I have found bromoform to work most effectively, in a very short time reducing the frequency of the cough, causing a moderately free expectoration, and consequently relieving the muscular distress of the patient To such cases I give the drug in capsule (letting the patient fill the capsule) in doses ranging from 20 to 30 drops every six hours

The danger signal is usually plainly to be seen, drowsiness following the exhibition of an overdose, usually in course of an hour or two

In conclusion, let me again lay stress on my method of giving this drug, viz begin with a known safe dose, then push to the limit of evident relief of symptoms as rapidly as possible In this way we may expect to avoid many of the complications and save much time in the treatment of this disease—as well as markedly reduce the mortality

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DOUBLE CLUB FEET AND HANDS—TREATMENT

Read in the Section on Diseases of Children at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md, May 7-10, 1895

BY B MERRILL RICKETTS, M D

CINCINNATI

The object of presenting this subject and report of a case is to place one of the rarest affections on record, and to draw from its history and treatment any deductions that may be of profit

It is to be regretted that so little has been accomplished, especially in rendering the club hands more useful

Unfortunately, the causes do not lie within the domain of surgery—they being manifested in utero

Whatever the cause may be, the results are practically the same, if it is due to a neurosis, but little can be hoped for in increasing the usefulness of the affected extremity

If, however, the nerves should not be affected, and the deformity due to an over- or under-developed bone, the greatest benefit usually ensues from some surgical procedure

There is a condition found in the congenital paralysis of the extensors of the forearm which does not exist in the congenital paralysis of the extensors of the lower leg, viz, the ankylosis of the elbow joint This seems invariably the case

I have not thus far been able to find any report of ankylosis of the knee joint in paralyses of this nature

On the other hand, the joint motion of the knee is nearly always perfect, this may be accounted for by there being but one movement in the knee—the backward and forward one, we have beside this motion in the elbow, a rotary motion which renders the hand capable of abduction and adduction

These two movements are greatly lessened when the hand is flexed to the extreme, as in case of club hand This prolonged flexion in utero results in ankylosis, and the arms having less strength than the legs are more likely to remain quiescent

The arms are drawn forward, giving a narrow appearance to the chest, but the shoulder movement is usually good

Some if not all of the carpal bones are always changed in their shape as the result of prolonged affliction at a time when they are very soft and easily molded There may also be one or more absent

The second finger is usually very much flexed and overlapped by the index and third fingers The thumb is drawn across the palm and pain is experienced when it is brought into a normal position

Male, age 10 weeks well nourished Has four healthy brothers and sisters, congenital Extensors do not respond to either faradism or galvanism interrupted or straight Multiple neuritis of tibial and radial nerves Cut both tendo-Achilles and tendon and plantar fasciæ of both feet Applied plaster-of Paris massage, etc great improvement.

Multiple neuritis of the nerves supplying the affected muscles is usually found, but just what produces multiple neuritis remains a question In the case I present for your consideration, no cause can be assigned

The child, a male, white, was ten weeks old at the time that I first saw it, Jan 10, 1894, when it was placed in my private hospital for observation A consultation with Dr Phillip Zenner resulted in finding the subject well nourished, and the youngest of five healthy children The extensor muscles did not respond to either faradism or galvanism, interrupted or straight current It was found that there were multiple neurites of the tibial and radial nerves The bones of the two upper extremities and the left lower, including the tarsal and metatarsal, carpal and metacarpal, seemed to be normal in shape and number, also the bones of the right leg and foot, except the phalanges All of the toes of the right foot were imperfectly developed, while the tarsal and metatarsal bones seemed, as far as could be determined, as perfectly developed as those of the left foot There was, however, a slight curvature of the right tibia, and the talipes was of a higher degree Massage and light brass splints of my own construction were applied to the foot These were kept on for fifteen or twenty days at intervals of three or four days each, during these intervals vigorous massage was applied, each tendo-Achilles was divided, after which the normal condition was more nearly reached During this time, the mother was taught to extend the hands and massage freely The fingers were extended separately and collectively, and I must say that during the three weeks of treatment the improvement was much more than I had expected

The mother returned to her home after the third week and continued the treatment under the direction of Dr E S Buffington

About May 20, 1894, I again divided both the tendons and plantar fasciæ of each foot, which enabled them to be placed in a better condition than on any previous occasion

The extremities were bandaged with plaster-of-Paris, which was allowed to remain for ten days, at the end of which time it was found that the position of each foot had been greatly improved

The mother continues massage of the feet and hands, and the patient gradually secures better use of them

DISCUSSION

Dr Manley, of New York—This is a matter which must command particular attention on the part of those whose specialty is dealing with the diseases and deformities peculiar to very early life, and in connection with the subject which the Doctor has presented, the question arises, and upon which I hope the members here who have had experience in that class of cases will express themselves, as to whether it is the proper thing at an early stage in life, before the child is weaned and before it has begun to walk, to endeavor at once to radically overcome those deformities, or whether it is better to treat them by a gradual process of manipulation with appliances which will overcome the tendency to those spasmodic inclinations, and try to attain the end in view by massage and electricity

I must say that so far as my own experience goes, particularly in these cases of talipes varus, by a division of the tendo-Achilles, not only the correction, but hyper correction of the ankle of the foot, to keep the limb in that form until the spasmodic tendency is overcome, is usually done early I do not gather that in this case there was any history of heredity as to deformities in any of the ancestors of the child I simply wish to say that the deformity of the hands produced by action of the same or analogous set of muscles as in the legs, is quite unusual, and I think gentlemen here are interested in seeing the extent of correction the Doctor has effected in this very interesting case

Dr Ricketts—I am thoroughly convinced that the best means sometimes are the most radical, and that the best results are obtained only by the most radical means In this case, as in many cases of club feet and bow legs, I believe in a child it is best to put it in a condition whereby it can get upon its feet as soon as possible That is why we have better results in this condition of the feet than we do in the hands If we could go back to the period when we were quadrupeds, and put the weight on the hands that we do on the feet, there would be no reason why the hands should not improve in the same degree as the feet The question comes up in this case as to what is the best way of treatment The feet are improving rapidly, the hands are improving also, but as I stated in the paper, the improvement in the hands is much less than the improvement in the feet, for the reason, perhaps, that the weight of the body adds materially to the good influences in correcting the deformity of the feet This is the sixth case, I believe, that has been reported in this country, so far as I can ascertain Dr Reginald, about two years ago, reported five cases of this character, and I have since learned that this is about the sixth case reported thus far in American literature

PELVIC DISEASE IN WOMEN, AND INSANITY

Read at the Fifty-first Annual Meeting of the American Medico Psychological Association, at Denver, Colo., June 13, 1895.

BY GEORGE H. ROHÉ, M.D.
SUPERINTENDENT MARYLAND HOSPITAL FOR THE INSANE
CATONSVILLE, MD.

At the meeting of this Association in 1892, I reported, briefly, the results of my experience in operating upon a small number of insane women suffering at the same time from disease of the pelvic organs. This report was afterward supplemented by more extended and specialized papers read before the American Medical Association, and the American Association of Obstetricians and Gynecologists. The work has attracted some attention, and has given occasion for favorable comment and unfavorable criticism. In one instance, a laudable endeavor at imitation was rudely suppressed by the official interference of a State Commission in Lunacy whose *obiter dictum*, that operations upon the insane were "brutal and inhuman, and not excusable on any reasonable ground," as well as "illegal and unjustifiable," received the indorsement of some of the most distinguished members of this Association.

Whether the opposition to the work referred to, can be justified upon medical and surgical grounds, I shall examine later on. For the moment, I desire to invite your attention to the legal aspect of the matter, for if the assertion of the Pennsylvania Committee in Lunacy, that a surgical operation upon a lunatic is in all cases "illegal and unjustifiable," is correct, the sooner physicians and surgeons in attendance upon the insane know it, the better for themselves, although it might not be to the advantage of their patients.

I have devoted a good deal of time and attention to the investigation of this point. In the first place, it was desirable to ascertain what, if any, specific legislation bearing upon this matter existed. My own reading, as well as the experience of several eminent lawyers consulted, failed to disclose any statutory enactment governing the authority of a medical attendant to decide upon the necessity of a surgical operation upon a lunatic.

A priori, a surgeon acting in good faith, and for the benefit of his patient, might therefore perform an operation upon a lunatic without committing specifically, an act contrary to law. Of course it is a general principle of law, and this has found expression in specific enactments, that no one can *in invitum* be even touched by another. And this is held to prohibit the performance of a surgical operation upon a person without his consent. Decisions declaring an operation illegal if the consent of the patient has not previously been obtained are upon record. On the other hand, courts have generally held that this principle is not applicable where it could be shown that the operation was performed for the benefit of the patient.

So far as this legal principle has a bearing upon the performance of surgical operations upon insane persons, it is manifestly confined to the question of what constitutes valid consent. It has been held that a lunatic can not give such consent, and that no other person can give consent for the lunatic. On the other hand, the opinion is held that under certain circumstances, the insane individual is competent to consent to a surgical operation, and that the power to do so may likewise be delegated by a court of equity to the committee of the lunatic. The latter opinion is manifestly the more reasonable one.

The following propositions may be accepted as based upon the principles of law and judicial decisions governing the question of consent by a lunatic to the performance of a surgical operation.

1. The act of a lunatic, during a sane interval, has in law the validity of a sane person; therefore a lunatic, in a sane or lucid interval, is as competent to consent to a surgical operation of any kind as is any person.

2. The State, acting through courts of equity, is the guardian of all insane persons. The equity court appoints a committee as its agent for the discharge of this duty. Such committee is the legal guardian of the person and has the power to consent to such measures as may be for the lunatic's benefit. The committee of a lunatic has, therefore, the power to give consent for the performance of an operation upon the lunatic, if it should be for the latter's benefit.

3. The lunatic may, even if there is no absolutely lucid interval, be competent to give consent to the performance of an operation, if he understands its object and consequences. It is the central principle of the modern law of insanity that the validity of any act of a lunatic depends upon his capacity to perform the particular act in question. Thus it has been decided that a lunatic is capable of being a witness, although not capable of entering into a contract. The law would probably not exact so high a capacity in a lunatic to consent to a surgical operation as it would to enter into a contract. In these cases, however, the physician or surgeon must assume the responsibility of determining whether the lunatic has that degree of capacity requisite to consent. Manifestly, the surgeon is here placed in a delicate position, but one from which, in emergencies, he has no right to shrink. In all cases of doubt, where practicable, the authority of the equity court or of the properly appointed committee should be obtained. The law therefore, so far as it is applicable here, indicates the nature and sources of consent to a surgical operation in an insane person. The further question whether certain methods of treatment are justified—in other words, whether they are necessary or are for the benefit of the insane person remains to be considered.

Every one will agree that any person suffering from a local disease should receive treatment for that disease, irrespective of whether the person is sane or insane. Thus patients with acute infectious or inflammatory disease, disorders of digestion, affections of the heart, lungs, kidneys, surgical diseases, etc., would all receive appropriate treatment for the local morbid condition in all properly conducted insane hospitals. It has become customary in many institutions for the insane, to subject all patients on admission, or soon thereafter, to a physical examination. In this way it has been discovered that a considerable proportion of insane persons suffer from gastro-intestinal disorders, tuberculosis, heart affections, kidney diseases, etc. There seems however, still a widespread prejudice against examining the pelvic organs of insane women to determine the presence or absence of local diseases in the genital organs and pelvic viscera. The failure to make such examination, systematically, is doubtless responsible for the opinion current among asylum physicians, that pelvic disease is rare among female lunatics. I have been told by asylum physicians in this country and abroad, that pelvic disease must be rare among their female patients, because so few of these complain of symptoms referable to the genital sphere. Might I ask, how many cases of cardiac disease would be discovered if the physician waited for the patients to complain of disordered action of the heart, or of the kidneys? Has it not occurred to some of those here present to find an over distended bladder in a male patient when no complaint of local pain or discomfort had been made? I venture to say that systematic examination of the pelvic organs by one familiar with modern methods of examination would disclose a large proportion of pelvic disease among female lunatics. My own examinations in the Maryland Hospital have shown that fully 60 per cent of the women admitted have some lesion of the genital organs or pelvic viscera. Many of these are of so slight a character as to require no treatment, but others can only be relieved by some form of operative interference. Thus, of the affections I have frequently found, are rupture of the perineum, abscesses, cysts of the vulvo-vaginal gland, lacerated cervix uteri, catarrhal and purulent endometritis (usually following puerperal septic conditions) cancer of the uterus, fibroid tumors of the uterus, salpingitis and ovaritis, pyosalpinx and ovarian abscess, cysts of the ovaries and of the broad ligament, and pelvic peritonitis. Defective development of the external genitals has often been found in that class rather vaguely termed "degenerates." In a certain proportion of cases the diagnosis of masturbation can also be made with certainty by the physical examination.

The objection that a vaginal examination directs the attention of the insane patient particularly to the sexual organs, and in this way has a bad moral effect has, according to my observation, no validity. Most patients can readily be examined without an anesthetic, although in some the examination can be more satisfactorily made under anesthesia. Only once in upward of one hundred examinations did the vaginal examination produce an orgasm. This patient was suspected of masturbation, although she had never been detected in the act. The examination disclosed the elongated nymphæ so characteristic of the constant practice of this vice.

If it is true that pelvic disease is prevalent among insane women (an assertion easily confirmed or refuted by further observation) the question arises, Has the pelvic disease any etiologic relation to the mental disturbance? Upon this point, much more extended clinical observation is desirable. I incline to the belief that there is such an etiologic relation. But my experience is as yet too limited to establish this opinion as an axiom. The personal equation which governs every observer's work has not yet been determined. Others, with the same material might arrive at different conclusions. But no one has a right to deny the accuracy of my observations, or the validity of my inferences, unless upon a similar basis of personal experience. I refuse to recognize the authority of any critic "up a tree." He must come down from his perch and meet facts with facts. Arguments based upon prejudices will not answer.

I have expressed my belief in the causative relation of pelvic disease to insanity in women. The mere coexistence of pelvic disease and insanity in women does not establish such a relationship. The cure of the mental disturbance by removing the physical disease, would generally be accepted as a sufficient test. Unfortunately, a cure of the mental derangement does not always follow removal of the local disease. A little reflection will show that there are abundant reasons for this. The brain organization may have already been so much deteriorated by the persistent reflex irritation from the local disease, that local *restitutio in integrum* fails to restore the normal functioning power of the cerebrum. The habit of morbid action of the brain may have been so strongly impressed upon that organ that the original cause of the derangement is no longer necessary to keep it up.

As a contribution to the clinical material upon which eventually any satisfactory conclusion must rest, I shall report in brief my experience during the past four years in the Maryland Hospital for the Insane.

One hundred women were examined, in forty of whom the local lesions found were believed to justify operation. In thirty of these, abdominal section with removal of the uterine appendages, was practiced. In two of these, a subsequent abdominal section was done for the relief of distressing local symptoms. In one, peritoneal adhesions were separated, and in the other a small hematoma was found in the stump of one of the tubes, probably some ovarian tissue had escaped removal at the first operation. The symptoms were pain, metrorrhagia and uterine catarrh. In three of the thirty cases, a secondary vaginal hysterectomy was done. Two of these had already been subjected to a second laparotomy. One of these was finally cured, both of the local symptoms and the mental disturbance. Two cases were subjected to primary vaginal total extirpation of uterus and appendages. In two, repair of lacerated cervix was done. In six, the guardians of the patients would not consent to operation. Of the thirty abdominal sections, there were cured physically and mentally, ten; decidedly improved, four; unimproved, thirteen; died, three.

Of the three secondary vaginal hysterectomies, which are included among the thirteen unimproved after removal of the appendages, one was cured and two remain as before. Of the two primary total extirpations, one was cured and the other so much improved as to give strong hope of ultimate mental recovery. The two trachelorrhaphies both recovered, mentally and physically.

The final results of the operations at present are therefore cured (physically and mentally), fourteen; improved, five; unimproved, twelve; died, three. Total, thirty four.

I have frequently been asked, In what class of cases is an operation indicated? My answer always has been, Where there is local disease discoverable on examination. The mental symptoms, themselves, are no guide. Mania, melancholia, confusional insanity, hystero epilepsy have all been cured. The same forms of mental disturbance have sometimes not been benefited. In consecutive dementia and in epilepsy, where brain deterioration has already occurred, no improvement can be looked for in the psychic symptoms. I believe that in some cases of epilepsy, where there is pelvic irritation, an early removal of the source of the irritation would be of benefit to the patient. In all cases, however, where local disease exists, appropriate treatment is indicated, irrespective of the mental condition Thus, all three of the cases who died were of dementia, two consecutive to epilepsy In all of these there was abundant local disease to demand interference In one, there were large pus tubes and ovarian abscesses matting all the pelvic organs into a mass infiltrated with pus In another, there was an intra-ligamentous cyst as large as an orange The third case was an especially interesting one The patient was a young colored woman suffering from a second attack of insanity, the first outbreak having occurred in 1884 No accurate history of her symptoms could be obtained When admitted in 1895, she was in a state of dementia On physical examination she was found to have a large tumor in the abdomen, which simulated an ovarian cyst, although no definite diagnosis was made On opening the abdomen a large fibroid tumor was discovered, fed by a multitude of large blood vessels from the omentum Some of these vessels were as large as a finger, and one was so large that in its collapsed state it resembled somewhat a section of small intestine The tumor was not connected with the uterus or any of the other solid organs of the abdomen or pelvis It was adherent over a space, as large as the palm of the hand, to the abdominal wall on the left side, and suspended from the omentum through the blood vessels penetrating it from the latter structure The vessels were so friable that catch forceps would tear out as soon as applied The hemorrhage from the tumor, (which was so soft that the finger penetrated it with ease), and from the fragile blood vessels was terrific As the bleeding could not be arrested with the tumor *in situ*, the incision was rapidly enlarged, the adhesions between the growth and the abdominal wall separated with the hand, the tumor turned out of the belly and the vessels stripped off The latter were then tied in mass ligatures in three sections, including as much omental tissue as possible, to prevent the ligatures cutting through the friable vessel walls Three smaller fibroids were then enucleated from the uterus, and the appendages removed The abdomen was thoroughly flushed out with hot water, two gauze drains inserted, the wound closed with silkworm-gut sutures and the patient put to bed

The shock and loss of blood were, however, so great that in spite of the subcutaneous infusion of saline solution the patient died an hour and a quarter after removal from the table The tumor weighed nine and a half pounds and had probably been a pediculated uterine fibroid which finally became separated from the uterus One of the smaller growths removed had also a very small pedicle and would probably in time, had the patient lived, have become separated from its point of attachment

Twelve of the recovered cases have been discharged and all but one are alive and, so far as I have been able to ascertain, remain in physical and mental health Two are still under observation in the hospital

Of those noted as unimproved after operation, two have since died of tuberculosis, that fatal scourge of all institutions for the defective classes In no case has the operation seemed to make the patient worse

The clinical variety of mental disturbance in the recovered cases was puerperal insanity (mania), four, melancholia, six, mania, three, hystero-epilepsy, one Total, fourteen

In the cases in which complete recovery did not follow the operative measures there were of melancholia, two, mania, five, puerperal insanity (mania) one, dementia (including four epilepsy), seven (three deaths), paranoia, two, hysterical insanity, two, adolescent insanity, one Total, twenty

The number of my cases is too small to allow one to draw any conclusions, but if anything of practical value can be deduced from them it is that puerperal insanity, melancholia and simple mania offer the best chances of cure from the proper treatment of local lesions in the pelvis Of course it may be said that these forms of mental disorder are just those which yield in the majority of cases to the usual methods of management of insanity In seven of the cases, however, the insanity had lasted over eighteen months before any treatment directed to the local lesion had been instituted In a case of hystero-epilepsy, the patient had been in the hospital seven years, and one of the cases of puerperal insanity had been four and a half years insane I am convinced that earlier operation in appropriate cases would very largely increase the proportion of recoveries

I do not claim that these results prove that insanity is caused by pelvic disease, but they do show that judicious treatment directed to the physical disease benefits the patient's mental condition If that is an object to be desired, then I ask for these results, and for the views I have ventured to express, unprejudiced consideration

SOCIETY PROCEEDINGS.

Chicago Pathological Society

Regular Meeting, June 10, 1895

Weller Van Hook, M D , President, in the chair

(Concluded from p 586)

Dr E R Le Count, read a paper on

EMBOLIC ABSCESSES IN THE KIDNEY DUE TO THE MICROCOCCUS LANCEOLATUS OF FRAENKEL

The following case is submitted on account of the scarcity of similar recorded observations, and as affording positive knowledge concerning the etiology of chronic diffuse nephritis

Clinical History—(Abstract) S C , cabinet-maker, age 35, white, entered the Cook County Hospital Jan 26, 1895 He had been sick one week and complained of pain in the chest Examination revealed increased fremitus over the right lobe, bronchophony, an abundance of crepitant râles, and dullness on percussion The heart showed no enlargement, the sounds were obscured by the respiratory murmur, and there were no adventitious sounds On admission the temperature was 100 degrees F, pulse 118 and respiration 28 On the second day, temperature was lower On the third day at midnight the temperature rose to 104 2 degrees F From this time the temperature remained constantly above 101 degrees F, being frequently 103, 102 8, 104 2 degrees, etc Death occurred February 2, seven days after entrance

Post-mortem (Abstract) The pericardium was smooth and shiny and the cavity empty Heart, weight, 310 gr , size, left ventricle, 7 5 c m long, wall, 1 5 c m thick, right ventricle 8 5 c m long, wall, .3 to 4 m m thick On the anterior surface of the anterior mitral cusp was a large atheromatous area Some similar smaller areas were present on the intima of the aorta in the sinuses of Valsalva The myocardium was uniform in consistence and color Aortic, tricuspid, and pulmonary valves appeared normal Liver, weight, 2,200 gr It measured 21 x 19 x 18 x 8 5 x 5 c m It was rough and granular externally On section, the lobules appeared elevated and the interlobular regions depressed Left lung floated, crepitation was present throughout In the posterior portions there was an excess of blood and the pleura were adherent at the apex Right lung was solid, and maintained its shape when laid on a flat surface When placed in water, the whole lung sank beneath the surface The visceral pleura was thickened and covered with a fibrinous, quite adherent, yellowish gray exudate On section the entire lung appeared gray with a granular surface, from which casts of the more minute air passages could easily be scraped Spleen, weight, 380 gr , size 14 x 10 x 6 5 c m The capsule was wrinkled, there was no excess of connective tissue on section, and the substance of the spleen was soft and almost confluent Right kidney weight, 180 gr , size 12 5 x 7 5 x 4 c m Externally, there were seen a number of depressed areas along the external border, which showed reddish centers On section the cortical and medullary markings were quite distinct The depressed areas noted externally were found to be due to isolated areas of cortical atrophy In the pyramids were found numerous, white, gelatinous-like streaks, extending at right angles to the bases of the pyramid These streaks had the appearance of pieces of silk thread imbedded in the kidney tissue They were never found reaching from base to apex of the pyramid, but always a portion of the distance only, and were generally in that part of the pyramid nearest the pelvis of the kidney In the cortex a few similar areas were found, but in place of being linear they were dot-like The whitish streaks noted in the pyramids measured 1 to 2 mm wide Left kidney was similar to the right in size and weight, and like lesions were found on section The capsule was more adherent than that of the right kidney The other viscera showed no gross changes

Bacteriologic examination (by Dr G H Weaver) cover slip preparations from the pyramidal emboli stained according to Gram's method showed many lanceolate micrococci, arranged in pairs which were single or in short strings By treating with glacial acetic acid, and staining with solution of gentian violet, capsules are seen about the pairs Cultures made on Guarnieri's medium made from the embolic areas gave a growth of cocci which corresponded in every way to the micrococcus lanceolatus

Histologic examination of sections stained with hematoxylin and eosin revealed in the pyramids many linear abscesses or areas of necrosis Where the changes were least marked, the blood vessel (a branch of one of the pyramidal arteriole pencils) was found plugged with leucocytes Around this a small zone of infiltration with polynuclear leucocytes Many of these showed beginning nuclear fragmentation The larger areas were simply exaggerations of the more minute In these (the larger), the connection with the blood vessel was not as easily made out, the zone of leucocytic infiltration was wider, the central necrosis and nuclear fragmentation more marked Sections stained in picrocarmine for twenty-four hours and then by Gram's method gave a beautiful picture of the tissue changes, and showed the centers of the involved areas to contain large numbers of lance shaped micrococci, in pairs and occasionally two or three pairs together forming short strings Capsules about the diplococci were demonstrated in sections

The micrococcus lanceolatus or pneumococcus of Fraenkel was first found in the blood of animals which had been injected with sputum from patients suffering from pneumonia by Klein [1] The subject was afterward studied by Sternberg in this country

Foa and Rattone[2] injected pure cultures of the micrococcus lanceolatus into the kidneys of animals and found localized areas of inflammation as a result Dreschfeld[3] mentions finding the Fraenkel micrococcus in the vessels of the kidney but says nothing concerning the condition of the kidney tissues Senger[4] describes five cases of meningitis occurring with pneumonia, two cases of endocarditis, and two cases of nephritis But his methods were such, that they can not escape criticism as to proof of direct etiologic connection with the Fraenkel micrococcus as was later pointed out by Weichselbaum The last named author[5] in 1886 found the micrococcus lanceolatus in the connective tissues of the mediastinum, between the esophagus and vertebræ, and about the trachea, in cases of pneumonia Mircoli[6] described one case of primary acute nephritis in which he found encapsulated micrococci which stained with Gram's method These he considered as identical with the pneumococcus of Klebs Weichselbaum [7] again in an article on some of the rarer localizations of the micrococcus lanceolatus described one case of ulcerative endocarditis which followed pneumonia in which this microbe was found by culture methods in the vegetations of the aortic valve, and in an embolus of the Sylvian artery and the surrounding localized meningitis In this case two infarcts were found in the spleen but nothing was said concerning their bacteriologic nature or the histologic changes in the spleen tissue In another case of endometritis, peritonitis and pleuritis, the Fraenkel micrococcus was found as an etiologic factor in all places and it was recovered by culture methods from the kidneys The liver and kidneys presented a cloudy appearance and seemed swollen In sections from the kidneys a few micrococci were found in the small blood vessels

A third case of this series was a case of pneumonia complicated with suppurative joint inflammation At the autopsy a large infarct was found in the spleen, and in the kidneys were smaller infarcts Cultures from the kidneys were negative In sections from the kidney and spleen infarcts only few micrococci were found, and these in the small blood vessels The author believed these processes to be due to the Fraenkel micrococcus and accounted for the paucity of bacteria by the fact that being dead they would not take the stain As is well known this microbe may cause suppurative inflammation

Illustrative of this, Zaufal [8] in an article on otitis media notes its occurrence in an abscess in the region of the mastoid Weichselbaum [9] finds it as the direct cause of a case of primary acute peritonitis and Boulloche [10] describes in detail a case of multiple suppurative arthritis and myositis caused by the micrococcus lanceolatus Ortmann and Samter [11] were among the first to describe abscesses of the soft parts due to the micrococcus of Fraenkel The case was not unlike puerperal pyemia, but occurred in the male Abcesses formed in the right thigh, right and left popliteal regions, lumbar and coccygeal regions The observers also made mention of infarcts the size of a pea in the kidneys of a rabbit which was inoculated with a culture of the micrococcus lanceolatus, and in the infarcts the same organism was found

Nauwerck[12] found in two cases of nephritis which occurred as complications of pneumonia, cocci in the glomerular capillaries which he considered as identical with Friedländer's pneumococcus His results were incomplete as he made no cultures, nor was Gram's staining method employed

Pansini[3] reported four cases of primary acute nephritis due directly to the Fraenkel micrococcus He suggested that the microbe might emigrate upward, as it has been found often in the normal urethra

A case of primary importance is that reported by Eisenlohr [14] The patient had pneumonia in December, 1890, at which time the following symptoms of an acute nephritis developed anasarca, pleural effusion, urine, 6 per cent albumin, casts, red and white blood corpuscles, sp gr 1020 to 1015, quantity twenty-four hours, 1,000 to 1,400 c c m Recovering from the pneumonia, she suffered from uremic symptoms in January, 1891, at which time the quantity of urine dropped from 1,000 or 1,500 to 300 c c m for every twenty-four hours During the following summer the urine contained 2 to 3 per cent albumin Oct 14, 1891, symptoms of uremia again developed, which resulted in death four days later At the autopsy the kidneys were found small and granular , right, 9 x 6 4 c m , left, 9 5 x 5.3 c m The cortex measured 2 to 3 m m only The glomeruli appeared as small pale-red points, and the capsules were adherent Microscopic examination revealed in the cortex numerous large and small areas of round cell infiltration between the glomeruli and convoluted tubules, numerous hyalin casts in the tubules desquamation of the tubule lining, and in the pyramids also, round cell areas

While there was no way of proving in the case just cited, that the condition of the kidneys, and consequent uremia, was due to the localization in the kidneys of the micrococcus lanceolatus, the data here somewhat cursorily brought together seem to warrant the following conclusions

That an infection of the blood with the micrococcus lanceolatus may occur as a complication of pneumonia

That the secondary localization of these may cause various lesions, abscesses, septic infarcts, simple areas of necrosis, etc

That an acute nephritis during or following pneumonia, may be caused by embolic processes due directly to the micrococcus lanceolatus

That in the event of recovery from the pneumonia and the acute nephritis due to such embolic lesions, the resulting kidney lesions may play *an important part in the* production of a chronic diffuse nephritis

[1] Centralbl f d Med Wiss No 30, 1884
[2] Archiv Italiennes de Biologie T IX, p 336, 1884
[3] Fortschritt der Med 12, 1885
[4] Archiv f Exper Path Bd XX, p 380, 1886
[5] Wien Med Jahrsb 1886
[6] Centralb f d Med Wiss 1887
[7] Wien Klin Wochenschr No XXVIII, XXIX, XXX, XXXI, 1888
[8] Prag Med Wochenschr No XI, u f 1889
[9] Centralb f Bak und Par No II, 1889
[10] Archiv de Med Exper et d' Anat Path No II, 1891
[11] Archiv f Anat Path (Virchow) Bd 120, H 1, 1890
[12] Beiträge zur Path Anat Bd I
[13] Rif Med Napoli, 1893 IX, pt 1
[14] Deutsche Med Wochenschr No XXII, 1892

DISCUSSION

DR JAMES B HERRICK—The more we learn concerning the pneumococcus the more, it seems to me, do we see that we do not thoroughly understand this microörganism and the pathologic changes and clinical manifestations that it produces Clinically, at least, it seems not improbable that under the head of pneumococcus may be included diplococci that, though morphologically alike, are in reality not identical The pneumococcus shows itself in the lungs in the manifestation of croupous pneumonia It may excite inflammations of the various serous membranes, those covering the heart, its lining, *membranes of the* joints and not infrequently the meninges We know, *too* that in some unknown way it seems to excite epidemic cerebrospinal meningitis, and encephalitis I have seen an autopsy of a case where the sole finding was a little softened inflammatory area in the encephalon that contained nothing but a pure culture of the pneumococcus No infection atrium could be found in that patient after a most careful search

The findings of Dr Le Count seems to warrant his statement that in some cases of pneumonia the blood itself becomes infected with the pneumococcus

I have read an abstract of an article by some Italian whose name I can not at present recall, in which he claims to have found the pneumococcus in the blood of twenty-five consecutive patients with pneumonia In about half the cases the examination was made post-mortem, and in the remaining half the examinations were made during life Just how reliable his methods are, one can not accurately judge from the abstract His method of examination was to withdraw blood from the patient's blood vessels and inject a rabbit The rabbit died of pneumococcal septicemia He concluded as the result of his examinations that in cases of croupous pneumonia the blood was always infected

The practical bearing of Dr Le Count's paper is that the kidney should always be carefully examined, through the urine, as an aid in prognosis, and as an assistance in explaining the protracted course of cases of pneumonia such as the one just described

DR FRANK X WALLS—I have never seen a case of pneumonia with this complication, consequently *I have but little* to add to what Drs Le Count and Herrick have said A question of interest is a possible *explanation* of why this disease is so infrequent Suppurative *complications* in other organs of the body during the process of pneumonia are not infrequent, more particularly of the pleura, the peri- and endocardium, the meninges, etc Multiple renal abscesses in the course of other diseases, especially of a pyemic character, are frequent, and their frequency is explicable when we consider the histology of the kidney Yet, despite the frequent occurrence of suppurative processes in pneumonia, this kidney complication is exceedingly rare It is well known that the diplococcus exhibits great variation in the virulence *of its toxic* properties, as has been shown by experiments on animals It is the property of the kidney to eliminate toxins, and thus may render the bacteria inert, and explain why the *complication* is so infrequent That the kidney does eliminate *these toxins* in considerable quantity, abundant clinical and post-*mortem evidences* of renal damage during the course of pneumonia, *would seem* to bear witness The diplococcus has been *found in* the *urine* of pneumonia patients

A case of pneumonia which Dr Herrick recently saw in consultation, an elderly man, who died on the eighth day, I saw shortly before his death His urine, when examined showed, in addition to considerable albumin and blood, a considerable number of *cocci* But this was a case of nephritis which occurred at about the crisis of pneumonia Probably *the* infrequency of these lesions is due to the fact that ordinarily the diplococcus is mild, and the renal epithelium is able to take care of what toxins may be produced, until under unusual conditions of virulency these germs paralyze the integrity *of the* renal epithelium and abscesses form The Doctor has suggested that sometimes the disease is produced by secondary extension from the pelvis It might have been in this case secondary to a pyelitis, which is a much more frequent *accompaniment* of pneumonia than are multiple renal abscess

DR LE COUNT (in closing)—*In answer to Dr* Walls, I wish to state that there was no pyelitis and the kidney changes, both gross and microscopical, were not such as could be *explained by an* extension into the kidney substance from the pelvis of a pyelitis In the cases Pansini reported he merely offered that supposition as a possible explanation

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American Public Health Association

Proceedings of the Twenty-Third Annual Meeting held in Denver, Colo, Oct 1–4, 1895

FIRST DAY—TUESDAY—OCTOBER 1

The Association was called to order at 10 30 *o'clock* A M by the President DR WM BAILEY of Louisville, Ky, in the Brown Palace Hotel, with sixty-five *members, delegates* and ladies in attendance

The President in a humorous vein congratulated the Association, because *the members* had had the opportunity and privilege *of meeting in* the beautiful city of Denver

DR HENRY SEWALL, chairman of the Local *Committee of* Arrangements, delivered the Address of Welcome to the visitors, and explained the symbolic features of the badge which was to be worn by them for the purpose of indentification The violet ribbon typified the State flower, the columbine, while the yellow or gold colored ribbon to which it was joined was an exhibition of courtesy and intended as a compliment to the Eastern members who were *generally* regarded as "gold bugs," others thought the yellow ribbon indicative of the sun flower The silver brick and pin with which they were fastened, having on one of its three sides the letters Denver, A P H A, and 1895, needed no explanation, and as the suggestion had also come *from* the East that the bottom had dropped out of silver, *the analogy had* been *carried* out by making the brick hollow, *another compliment to the Eastern members* which they would doubtless appreciate *Your duties are largely regarded as those* of a *missionary* sense, and we expect to profit as a *result* of the good cause you are engaged in, and we gladly welcome you to the Centennial State The chairman then made a number of announcements appertaining to the various social entertainments for the visiting delegates and their families

REPORT OF THE EXECUTIVE COMMITTEE

This committee, by Secretary Watson, *submitted* a *list of about seventy applications* for membership which the committee *had considered* and *recommended* that they be elected members of the Association *Upon motion* to that effect, the secretary was authorized to cast the unanimous ballot for the names presented He also read a telegram, dated at *Chihuahua, Mexico, from the* Mexican delegates, stating that they were delayed on account of a washout along the railroad

The first paper announced,

THE MISSISSIPPI RIVER AS A SEWER,

and was read by DR JOSIAH HARTZELL, of Canton, Ohio, member of the Ohio State Board of Health The author produced statistics to show the tremendous quantities of dead animal matter which yearly floated down the Mississippi, and the consequent damage to public health *He* criticised Chicago and the sewer purposes to which it devoted the Chicago River Comparisons were made of the Valley of the Mississippi, with the Nile, Rhine and Chinese rivers, and gave an estimate of the territory drained and the consequent amount of filth, dead and decaying vegetation, carcasses of animals, etc , that were washed into the river, converting it into a *cloaca maxima* for the whole interior basin of the continent In Leeds, England, the authorities, on complaint of the residents living below the city, prohibited the municipal government from using the stream for such purposes, and that must be the ultimate result in this country Strict National legislation to prevent the principal streams of the country from pollution, in order to save the game fish in those streams was suggested Whether this result will be obtained, he doubted, so long as the average politician is engaged in scrambling for office, as he is not a *sanitarian and is not* greatly interested in public health matters *Incidentally, the* writer gave a brief description of the great drainage *canal at Chicago*, and the benefits to be derived therefrom *Disposal of* sewage in the cities of Berlin, Paris, London and New York were *mentioned* and briefly described The fever plagued cities of western Pennsylvania, West Virginia, Ohio Illinois, Minnesota and Nebraska were also mentioned The statutes of Illinois, Ohio and other States were quoted at length, regarding the pollution of streams The laws on fish culture were also quoted *in extenso*

The remedy advocated, is the establishment of a government commission, analogous to the English Rivers Pollution Commission, or the German Imperial Board of Health This commission should supervise the sanitary condition of navigable waters, and should have ample authority So long as the general government is inert and indifferent in regard to this matter, the State Boards of Health of all the States bordering on the Mississippi system of waters are handicapped Their efforts to suppress epidemics arising in other States and carried to them through the medium of rivers under government control, are paralyzed No general plan of sanitation and of stream purification can be successful until the State Boards of Health have the practical coöperation of the Federal authorities and this can be accomplished by a National Department of Health or a commission appointed by Congress having this matter under its charge

The succeeding paper was upon an analogous topic,

WATER POLLUTION, AND PURIFICATION OF WATER SUPPLIES,

read by Dr Peter H Bryce, of Toronto, Secretary of the Provincial Board of Health of Ontario, who considered the subject mainly in its international aspect He criticised the authorities at Buffalo and the recklessness with which they distributed garbage, so that contractors *might* be the gainers, commercially, in relieving that city of its unpleasant effects, while the cities across the border would be *the sufferers* He cited instances in which he had pursued some garbage boats in a cutter in Lake Ontario, *and stated that* the government had narrowly escaped an international complication on account of *what he had done It was the duty* of health officers on both sides of the line to see that sanitary regulations were rigidly enforced Especially was this true, regarding the St Clair or Detroit River, and the Niagara River

DISCUSSION

Dr Ernest Wende of Buffalo, N Y, desired to make a correction regarding the disposal of garbage in his city Buffalo cremates her garbage, and does not deposit it in the Niagara River or Lake Ontario

Dr A W Cantwell, of Davenport, Iowa, said regarding the pollution of the waters of the Mississippi River, that he thinks their purification can only be brought about by National legislation, and the same authority will prevent the dumping of garbage into our rivers The proper method to dispose of the latter is by cremation, and this costs something

Dr E A. Guilbert, of Dubuque, Iowa, said he deeply appreciated any action that may be taken in this matter by this Association and that this matter was before the last Congress His State Board of Health commended the bill, as this can not be done by State legislation

Dr P H Bailhache, of Staten Island, N Y, said that if this matter, or any bill having for its object the passage of such measure was before the last Congress, that the subject was dead—as the last Congress had died

Dr J J Kinyoun, of Washington, D C, thinks the subject of the pollution of water supplies in the United States is unique and stands alone He advocated the appointment of a special commission to take charge of this matter

Dr. Felix Formento, of New Orleans, La —We should not lose sight of local interests from a sanitary point of view These platonic recommendations are not usually acted upon We should do something beyond the expression of our opinions We must have a practical plan I do not think the lower Mississippi is polluted, as has been stated, from the offal deposited in its waters several hundreds of miles above New Orleans

Dr J N McCormack, of Bowling Green, Ky, moved, duly seconded, that a committee of three, members of this Association, be appointed by the chair, with Dr Bryce as chairman, having full power to formulate a plan and suggest to Congress that something in the way of National legislation in this matter should be done

Dr R H Lewis of Raleigh, N C, thought that this committee should suggest to Congress just what should be done, and that it should submit the plan to be carried out

The motion then prevailed

Dr E P Cook, of Mendota, Ill thought that there is no subject more worthy of our consideration than that of water pollution and pure water supply Purity of water for domestic purposes and drinking purposes is one of the great problems that we are now discussing in interior Illinois where I live Filtering and sterilization will do it, but a cheap method is what we are desirous of getting What disposition is to be made of garbage, rubbish and sewage is another very important subject to deal with Cremation of the former is costly where a crematory would have to be erected and kept in operation in a small city of 5,000 inhabitants, while the latter, we know, when it finds its way into our wells and small streams contaminates the water in them This is inevitable Regarding Chicago and her disposal of sewage, the nearest course to the sea is through its new drainage canal, the Illinois and Mississippi Rivers He thinks our Canadian neighbors should be under obligations to Chicago for diverting her sewage away from the lakes

Mr R Hering of New York, spoke from the standpoint of a civil engineer He heartily indorsed the sentiments set forth in both papers, in their ideas of the purity of water supplies He believed in National legislation upon this subject, although some of the questions advanced in the first paper are impracticable People can not pay for complete purification of drinking water The question is not nearly as serious as has been made to appear here to day An estimate has been made that we can not precipitate the sewage for less than 30 cents for every man, woman and child Regarding the Chicago drainage canal, 600,000 cubic feet of water per minute from Lake Michigan, passing through it, will purify the stream along down the canal and river to the Mississippi, then the Chicago River will not be nearly so bad as it is now All waters for drinking purposes should be filtered by those residing in large cities As for garbage, this should never be permitted to be put into streams Civil engineers are often confronted with these questions, and almost as frequently perhaps, it is a question of not what we ought to do, but what we are obliged to do, as the next best thing on account of lack of money

Dr C O Probst, of Columbus, Ohio, said that the farmers in Ohio have combined together and given bonds, and in two or three instances they compelled cities for *instance Canton,* Oberlin, and Fostoria, to purify the water supply or erect a crematory as was done in the latter city These cities at first refused to do this Fostoria built what they call an *intermitting chemical plant*

Dr Bryce closed the discussion, by stating that he thought a civil engineer like Mr Hering should be made a member *of the committee*

The concluding paper of the first session, was "The Report of the Committee on Animal Diseases and Animal Foods," by D E Salmon, D V M, chairman, Washington, D C, which was read by Dr Hewitt of Minneapolis The report was brief and one of the material points it contained was that the United States government should have control of *meat inspection*, particularly is the inspection of pork carried on in a perfunctory manner, and it is not thorough *in the various States in the Union*

The report was discussed first by Dr P H Bailhache who stated *that the inter-state law* is drawn as closely as it can be, for the enforcement of any law, and the Federal government can not further interfere It has no right to step in and order anything done different from that which has been properly enforced by any State

Dr Carl Weidner of Louisville, Ky, said he could not in*dorse the argument of Dr* Salmon in the matter of pork inspection as being inadequate and useless for trichina This *argument is dangerous* A thorough microscopic inspection will detect trichinous meat We might as well say that we can not detect polluted water This argument is unjust to the people Thorough inspection will do a great deal of *good*

Dr Hewitt stated that he does not take kindly to State *inspection Tuberculin* and mallein is supplied to a State when requested, from the United States *government Over* one thousand animals in Minnesota had undergone the test Coöperation between a State and the nation is easily arranged, and this is a practical way to accomplish that which is desired

Dr Kinyoun *indorsed* in the main the views contained in the report, but thought not enough emphasis was placed on the matter of tuberculous meat While the greater portion of bad meat can be detected if the carcasses are carefully *inspected* yet as long as we shut our eyes to microscopic examination, we are going to invite tuberculosis

Dr H N Avery *of* Indianapolis, Ind —In relation to tuberculous meat and swine fever, nothing but local inspection by local health officers can detect these conditions This should be done by meat inspectors At Indianapolis nearly five hundred head of milch cows had been inspected in the last thirty days The sputa, and milk, cheese and butter should all be examined microscopically Ocular and physical examination are entirely useless Tuberculin is the only infallible test, and in nine cases out of ten, we can detect tubercular disease if it is present

Dr Henry Mitchell, of Ashbury Park, N J, Secretary of the State Board of Health of New Jersey, offered the subjoined preamble and resolution, which under the rules was referred to the Executive Committee

Whereas, An order of the Post Master-General prohibits the use of the mails for the transportation of diseased tissues

Whereas, Specimens suitable for bacteriologic examination can, when inclosed in proper packages be transported in the mails without endangering the health of persons who may handle them, and without risk of contaminating other mail matter

Whereas, bacteriologic examination in cases of tuberculosis and certain other infectious diseases constitute an invaluable defense against the spread of the pestilential affections by providing an exact method for early and accurate diagnosis Therefore be it

Resolved, That the American Public Health Association hereby respectfully requests the Postmaster-General to so modify the order now in force that specimens of diseased tissues, when properly inclosed in approved mailing packages, may be admitted to the mails for transmission to State and municipal laboratories

First Day—Afternoon Session

The afternoon session was called to order at 2 45 o'clock with President Bailey in the chair, and was devoted to a symposium on Car Sanitation The first paper presented on this subject was a brief one, and in absence of its author, Mr E C Jordan, C E, of Portland, Me, was read by Dr A G Young, of Augusta, Secretary of the Maine State Board of Health Although the writer made no recommendations, he described the manner in which the Pullman and Wagner sleeping car companies cleaned their cars, removing rugs, carpets, mattresses, etc The mattresses are renovated every six months and the blankets changed once in three months In case of any infectious disease the utmost care is used, and disinfectants are liberally applied

The second paper was

ON THE VENTILATION OF RAILWAY COACHES,

by Prof S H Woodbridge, of Boston, Mass, (one of the professors in the Institute of Technology of that city) which was, in the absence of the author, read by Dr S H Durgin, ex-President of the Association The following is a brief synopsis

In enumerating the discouragements which meet those trying to secure perfect ventilation, the author stated that human frailties were a greater obstacle than mechanical difficulties The ventilation necessary in a hospital is unnecessary in a railway coach, and accommodation trains require less ventilation than cars used on lightning express trains The per capita space is about sixty feet in the average day coach To regularly supply the quantity of fresh air requires many improvements on the present unreliable and inadequate methods The use of vestibule cars, made up for long runs, interferes with ventilation from the ends of the cars

These propositions were laid down for the proper ventilation of cars The air must be furnished by other than natural means The supply must be affected as little as possible by the movement of the coach The heat must be furnished from the floor, and the air must be filtered to avoid dust and cinders In winter the air must also be warmed continuously, and regularly supplied without annoying drafts The action must be plenum rather than vacuum, and care must be used to secure perfect distribution An electric fan with a suitable filter was recommended and overhead channels for supplying air The development of electric appliances will assist in securing a perfect system of ventilation Finally, it should be remembered that in all ventilating undertakings but one-half of the requirements are fulfilled when the most perfect apparatus conceivable is furnished The excellence of a tool does not insure the quality of its product Quite as much depends upon the user as the tool, and not infrequently a superior apparatus is made, on its reputation, to bear the burden of the operator's infirmities It would seem to be of more than doubtful utility to equip coaches with carefully designed means for ventilation unless railroad employes are systematically trained to their use, and they and the traveling public are educated to habits of cleanliness and are free from the trouble-making notions and imaginings which prevail, even among cultivated people, with reference to ventilation The proper function of ventilation begins only after cleanliness has done its most perfect work For a long time to come, to an innocent and dutiful ventilation is likely to be laid the sin of uncleanliness of person and environment

Ventilation deals with unseen air, unseen aerial movements, and generally with unseen motive forces The field is rich for a rank growth of notions and imaginings and quackery Hence the large and important part imagination plays in ventilation effects It is important, therefore, that any system planned to give the surest and highest satisfaction should furnish ocular evidence of its existence and of its action In a well ventilated room a raised window through which no air moved inward has often been known to give great and immediate relief Any successful crack ventilation must include such self announcing means as shall enlist imagination in its favor and put an effective stop to window raising, that fatal disturber of the working of artificial ventilation In conclusion, he thought the imagination was an important factor and not to be overlooked in any system of ventilation, but the railway managers should be required to remove every reasonable excuse for opening car windows

The next paper announced on the program,

RELATING TO CAR SANITATION,

was by Dr Domingo Orvananos, of Mexico, Mex, and was presented by Dr C O Probst He briefly described the opposite ideas which prevailed in the United States and Mexico with reference to car ventilation, due to the different climatic conditions The subject was one full of difficulties In Mexico, where the railways are generally traversing high ground, the ordinary way of opening a few windows keeps the car comfortable, while he had noticed that in America the travelers generally wished the ventilators removed and the windows closed, the reverse was the case in Mexico The ventilation must be regulated according to the temperature It is much more difficult to devise a means of ventilating sleepers than day coaches He finds the prevention of the transmission of disease an even more difficult matter than the regulation of ventilation, but thinks the Mexican railways are better off than those of the United States

1 The cars, except the sleepers, are not furnished with upholstered seats

2 Only a limited number of persons travel

3 Two of the commonest infectious diseases, tuberculosis and diphtheria, are almost unknown in Mexico Other infectious diseases are not propagated in railway cars because convalescents are not allowed to travel After much investigation, he had only found a few cases of bronchitis, pneumonia and pleurisy which originated in cars In treating of measures on this subject, it is always necessary to insist on them until their adoption is obtained The measures he advocated were

1 Watchfulness on the part of the local sanitary authorities to whom pertain each of the railroad stations with large traffic, and with the object of preventing the embarkation of individuals who might transmit the diseases

2 The appointment of medical inspectors on the lines or in the places where it is considered necessary

3 That the railroad cars should be furnished with cushions and hangings that can be easily taken off and replaced

4 The disinfection of the cars themselves, either wholly or in part, whenever the medical inspectors should deem it advisable

5 The prohibition under severe penalties of expectorating in any part except in the cuspidors, of which a sufficient number should be provided, and which should contain a solution of bichlorid of mercury of 1 to 1,000

The last paper on the program and the most thorough treatment of the subject was the

REPORT OF THE COMMITTEE ON CAR SANITATION,

which was presented by Dr Granville P Conn, of Concord, N H, chairman of the committee He invited attention to the fact that his subject was one which was evidently growing in interest, the proof of this being amply shown in the fact that there were three papers on this question, and a whole session devoted to its consideration Dr Conn thinks there is danger of overlooking the ventilation of the day coaches, in dwelling on that of sleeping cars He spoke also of the necessity of holding employes responsible for the condition of the cars in their charge, and cited the Wagner Palace Car Company as having instituted a school of instruction for their train employes A number of reports from various railways were submitted, showing the sanitary precautions used in the care of cars, supply of drinking water, ice, etc A fact cited worthy of note was the international conference on sanitary care of railways which was recently held in Amsterdam Its object was to consider the methods in use in various countries to care for the interest of travelers on land and sea Its work was divided into three heads 1, capacity of officials, 2, medical service, 3, hygienic interests of travelers and employes As yet the sessions have not been made generally public

For the purpose of obtaining accurate information, Dr Conn sent out a circular letter to the general passenger agents, and was generally referred to the managers of the rolling stock The answers show a wide range of opinion and practice in these matters One road having one of its termini in Denver says it has *no sanitary system*, and does not believe it would be practicable or necessary to have an inspection similar to that made of the wheels The Chesapeake & Ohio railway has a very satisfactory system, as has also the Baltimore & Ohio The conditions on the Southern Pacific are by no means reassuring to the traveler Dr Conn said, in conclusion, that this was a matter which was receiving more and more attention, and that the through line that takes the most advanced position in alleviating the discomforts of the traveler, that shows by the cleanliness of its cars, their heating and ventilation, and above all by the uniform *courtesy of their employes*, the fact that they have a department of hygiene as well as of surgery, will reap its own reward, and save thousands of dollars in its advertising department Of the preceding papers, he said the conservative manner in which Senor Dr Domingo Orvananos, of the Republic of Mexico, has treated the subject of car sanitation, I most heartily commend the same to the public, and to the railway managers of countries now embraced by this Pan American Association The sentiments contained in his report are those of wisdom and ripe judgment, and are worthy of the man, as well as an honor to the Republic of which he is a representative sanitarian

The report of Professor Woodbridge, of Boston, is a clear and concise statement of the sanitary conditions which he found in railway cars that came under his observation, and the suggestions which he has made are to be noted, and if adopted by railway companies would insure to the public more healthy conditions in traveling, and prove of immense value to the railroads themselves

DISCUSSION

Dr Kinyoun called renewed attention to the disinfection of coaches, especially of the sleeping cars of any of the sleeping car companies They should be disinfected at the end of the route, or of every trip if it lasts over twelve *hours Phthisis* diphtheria and perhaps pneumonia and the exanthems could be transmitted from State to State, hence the most stringent methods should be insisted upon everywhere What germicide shall we use for the germs of tuberculosis? A 15 per cent volume of burning sulphur is not sufficient, although it might do for the exanthems *Steam will, in a certain* sense, prove adequate when used by an experienced or competent person An ordinary car can be disinfected in ten minutes by the use of a spray of formalin which he had found to be the best disinfectant or agent to kill smallpox and other germs It is more effective than tricresol or carbolic acid and is easy to handle

Dr Durgin inquired of Dr Kinyoun if he had considered the separation of the upholstered work, mattresses, etc, from the woodwork in the use of formalin or sulphur

Dr Conn closed the discussion by saying that formalin is a well known agent, and when it dries, it forms a dust or powder that will kill germs in the carpets and in the other furnishings of our cars He also stated that he thinks the mechanic and the sanitarian are coöperating in this matter

At 4 10 o'clock the session adjourned until 8 P M

First Day—Evening Session

The Association re assembled at 8 15 o'clock P M at the Trinity M E Church with the President and Vice-President (alternating) in the Chair Others on the platform were ex-Presidents La Chapelle, Montizambert, Hewitt, Formento Durgin, His Honor Mayor McMurray, His Excellency Governor McIntyre and Chancellor McDowell Several organ solos were rendered by Dr J H Gower After prayer, President Bailey introduced Governor McIntyre, who formally welcomed the Association to the Centennial State as follows No Association which had honored Denver with its presence was more important in the subject matter of its deliberations than the one which had just convened He drew a comparison between the treatment of the health of the individual as contrasted with the health of individuals in the aggregate So important is this subject that even now the matter of public health does not receive the consideration which is its due He believed in the elevation of the public health officers to the position of recognized State officials He heartily welcomed the Association to this State and capital, and closed amidst applause

Mayor McMurray was then introduced He said it was a pleasing duty which devolved upon him to welcome them individually and as an Association The subject to which they devoted themselves transcended in value any that could come up for consideration among any body of men or women, for the human life is of preëminent importance Whatever the line they might consider, whether disease in the epidemic or ordinary form, their effort was to advance the public welfare Whatever they did he hoped they would have a very pleasant and profitable time while in Denver and that the result of their labors would be of value not only here but in every community from which they hailed He hoped their stay would be enjoyed and they would find pleasure in returning here in the days to come in their capacity as private citizens The Mayor was greeted with a burst of hearty applause

The magnificent "Offertoire" of Batiste was then rendered by Dr Gower, after which Dr Wm Bailey of Louisville, Ky, was introduced to deliver his Annual Address as President of the Association Dr Bailey begged to acknowledge the honor of having been President for the past year The Association numbered in its members and workers some of the most illustrious sanitarians of the continent "I congratulate the Association," said Dr Bailey, "upon its meeting in the convention city, the Queen City of the Plains, the beautiful city of Denver In the wonderful State of Colorado, fit Centennial State, with advantages as yet untold, with a climate that will challenge the admiration of the sanitarians as perhaps none other can, with an atmosphere of marvelous purity almost sterile as to pathogenic germs, and without the necessity of international agreement of unlimited coinage, the coin of the realm, the parity of which is guaranteed and maintained by the Almighty himself

"The American Public Health Association had a valuable object lesson of the good the Association had done by a reduction of 50 per cent in the death rate of this city," Dr Bailey continued "The past year had been a good one from a health standpoint Cholera threatened the Western border, but the efficient corps in California might be depended upon to keep it out, calling for assistance if need be He spoke of the importance of quarantine regulation, and the value of the report on the purity of water supply A number of college professors were unable to attend the meeting because of the college sessions having commenced This suggested the change to an earlier date the time of meeting The Association should perfect its plans to celebrate the centennial anniversary of Jenner, the discoverer of vaccination He suggested a memorial report He said there was hope that in time they would be able to afford immunity from such diseases as cholera, scarlet fever, diphtheria and consumption, as they now have immunity from smallpox"

The speaker wondered that there was not a National Department of Health Gladstone had termed the work the highest object of government More careful quarantine laws were needed Careful inspection would prevent many of the contagious and infectious diseases The difference between the government of the United States and foreign governments in respect to the investigation of diseases and their causes was contrasted Professor Koch was assisted by his government

The question of the pollution of the water supply was next touched upon Nothing was of more importance than the purity of water He hoped the members of the convention would assist the work of the committee appointed to investigate this vital question

"The greatest question," said the speaker, "to sanitarists is immunity from disease Management of disease must become more national as this was investigated and made known" He quoted the result of vaccination in lessening the ravages of smallpox in proof of his statement, and added that smallpox should be considered a disgrace to a city He advised a report setting forth the truth regarding vaccination so as to remove false impressions Such a report would be a fitting memorial to Jenner He gave it as his opinion that immunity from other infectious diseases was sure to come in a few years as a result of study of bacteria and disease germs

Chancellor McDowell was the last speaker on the program He said that the public health question had made many persons uncomfortable He was afraid to go anywhere because he feared to meet a microbe with a club It was uncomfortable because the physicians had turned the microbe loose Now there was but one thing to do That was to give public health the right of way He believed in personal liberty, but personal liberty required some restraint because of the public welfare The man who refused to obey the public health officer deserved punishment Were not the water rates so high he would favor the mayor turning the hose on the offender The health office should be taken out of politics If it were kept there he feared it would become full of microbes The speaker urged upon the public the necessity of joining with and seconding the health officer in his work, and closed by a wish for the thorough enjoyment of the delegates during their stay

At 9 30 o'clock the Association adjourned until Wednesday forenoon

(*To be continued*)

BOOK NOTICES

The Pathology and Surgical Treatment of Tumors By N Senn, M D, Ph D, LL D, etc, etc Illustrated by 515 engravings, including full page colored plates 8vo, pp 709 Philadelphia W B Saunders 1895

In the year 1890, Professor Senn in the preface to his work on the "Principles of Surgery," said "When the subject of tumors was reached it was found that the manuscript had become so voluminous that it was deemed advisable to publish the volume without this part of the intended scope of the work, an arrangement to which the publisher kindly gave his consent It is the author's intention to make good this defect by the preparation in the near future, of a special work on "The Pathology and surgical Treatment of Tumors'"

The book under consideration is the outcome of the promise made five years ago, and the promise has been well and faithfully performed in the production of this handsome volume

There are thirty chapters, viz i, Origin and Nature of Tumors, ii, Morphology and Multiplication of Tumor Cells, iii, Anatomy and Biology of Tumors, iv, Pathology of Tumors, v, Tumors in Plants and Animals, vi, Etiology of Tumors, vii, Clinical Aspects of Benign and Malignant Tumors, viii, Transformation of Benign Tumors and Post-Natal Embryonic Tissue in Malignant Tumors, ix, Diagnosis of Tumors, x, Prognosis of Tumors, xi, Treatment of Tumors, xii, Classification of Tumors, xiii, Papilloma and Onychoma, xiv, Adenoma, xv, Cystoma, xvi, Carcinoma, xvii, Fibroma, xviii, Lipoma, xix, Myxoma, xx, Chondroma, xxi, Osteoma, xxii, Odontoma, xxiii, Angioma, xxiv, Lymphangioma, xxv, Lymphoma, xxvi, Myoma, xxvii, Neuroma, xxviii, Sarcoma, xxix, Teratoma, xxx, Retention Cysts

This book is the most exhaustive of any recent book in English on this subject It is well illustrated and will doubtless remain as the principal monograph on the subject in our language for some years It will be observed that the new spelling has been generally followed

The book not only includes the pathology of tumors, but in describing the surgical treatment discusses fully the operative surgery of the regions involved Those interested in any special branch of operative surgery, except ophthalmology, will find the modern operations described in detail The vast experience of the author has told its own story in these pages, which are replete with solid information, and his masterful acquaintance with German literature shows itself at every turn The book is handsomely illustrated, and printed on good paper Many of the illustrations are inserted plates The publisher has done his work well, and the author has given a notable and lasting contribution to surgery

Cutaneous Medicine, A Systematic Treatise on the Diseases of the Skin By Louis A Duhring, M D, etc, etc Part i, Anatomy of the Skin, General Symptomatology, General Etiology, General Pathology, General Diagnosis, General Treatment General Prognosis Illustrated Royal 8vo, pp 221 Philadelphia J B Lippincott Company 1895

"The present work," says the author, "has been written to take the place of the author's former 'Practical Treatise on Diseases of the Skin,' which for several years has been out of print"

The vast experience of Prof Duhring as a teacher and practitioner makes his statements authoritative, and his book trustworthy in all matters pertaining to dermatology proper The author, pp 216 and 217 in mentioning skin grafting, quotes the old Hunter experiment of the transplantation of the cock's spur, and of the tooth, and then passes immediately to Reverdin's epidermal grafts in 1869 The remarkable experiments of the late Frank Hastings Hamilton, then of Buffalo, in skin grafting, set forth in a paper read June 27 1854,[1] more than fifteen years prior to the appearance of Reverdin's paper, which appeared in the *Gazette des Hôpitaux* for Jan 11 and 22, 1870, are not noticed

As a rule, the author has very carefully noted all recent literature and has even quoted from papers read at the last meeting of the Association in 1895

The paper is thin and inferior, but the illustrations are numerous and well executed plates carefully inserted We shall look with interest for the remaining parts of this system The author has great power of condensation There is no superfluity or redundancy in his expressions, always clear, never involved, and withal extremely precise, he manages to put nearly twice as much in a page as the average writer The work therefore, will be encyclopedic without being bulky

A Text-Book on Nervous Diseases By American Authors Edited by Francis X Dercum, A.M, M.D, Ph D With 341 engravings and 7 colored plates Philadelphia Lea Brothers & Company 1895

We have in this volume the latest of "American" text-books, and one that worthily maintains the honor of the American name The list of the authors who have contributed, under the able editorship of Dr Dercum, to produce this work is enough to justify expectations that will not be disappointed on its careful examination As a composite production it perhaps lacks the symmetry that a single authorship would give, but this is so little an advantage that probably most of its readers will prefer it as it is

Among the articles deserving especial mention as most excellent statements of our present knowledge of their subjects, may be mentioned the introductory chapter on Methods of Examination, by Drs Weir Mitchell, Dercum and Oliver, that on Nervous Affections following Railway and Allied Injuries, by Dr Philip Coombs Knapp, which is one of the best and most judicious descriptions of this forensically important class of cases, that we have seen, the chapter on Cerebral Localization, by Dr Mills, which seems thoroughly up to date, and that on the Diseases of the Cranial Nerves, by Dr de Schweinitz We mention these, not invidiously, as better than the rest, but simply because for one reason or another they particularly attracted attention All the contributions to the volume seem to be excellent, and the book is cordially recommended to American readers as representing the actual status of our knowledge of its subjects, and as the latest and most fully up to date of any of its class

Modern Materia Medica, with Therapeutic Notes for the Use of Practitioners and Students of Medicine By Dr Otto Roth Seventh edition Revised by Dr Gregor Schmitt 8vo, pp 467 New York Wm Wood & Company

Whatever may be the uses of this book in Germany, if it is ever to be of any particular service in the United States it must be brought to conform to the United States Pharmacopœia As it has been produced, it is in the first part a mere catalogue of drugs and in the second a list of diseases with reference to the appropriate drug therefor The obsolete dosage of the old British and United States Pharmacopœias is used, which is all the more remarkable, as the United States Pharmacopœia of 1890 adopted the decimal system and the present revisers of the British Pharmacopœia long ago announced their intention of joining the remainder of the civilized world in the use of the decimal system of weights and measures

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[1] Buffalo Med Jour, vol, x, p 435

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SATURDAY, OCTOBER 12, 1895

THE TREATMENT OF DIPHTHERIA BY ANTITOXIN

WELCH contributes an important article on the treatment of diphtheria by antitoxic serum (Bulletin of the Johns Hopkins Hospital, July-August, 1895,) and studies carefully the statistics of the results already reported

In a brief historical introduction, he shows that while BABES and LEPP in 1889 were the first to show by the way of experiment that it was possible to vaccinate with fluids and cells of animals which had been rendered refractory to certain diseases, such as rabies, yet the first publication clearly demonstrating the principles of serumtherapy was made by BEHRING and KITASATO in 1890, in which they brought forward proof of the immunizing and curative property of the blood and serum of animals artificially immunized against tetanus, and then BEHRING and WERNICKE demonstrated that the serum of animals artificially immunized against diphtheria has the power to protect and cure susceptible animals inoculated with the diphtheria bacillus or its poison In the fall of 1891 the first trial of serum of immunized animals in the treatment of human diphtheria was made in VON BERGMANN's clinic in Berlin In April, 1893, BEHRING referred to thirty cases treated with so called normal serum In April, 1894, EHRLICH, KOSSEL and WASSERMANN reported 220 cases treated with the serum, and the era of serum treatment of human diphtheria by approximately sufficient doses of the antitoxin really begins with this publication In September, 1894, ROUX presented the subject at the Hygienic Congress in Buda-Pesth with such clearness and force and brought forward so strong and convincing statistics that the attention of the physicians of the world was arrested and the antitoxic treatment of diphtheria has, since that time, *continued to be the foremost medical topic of the day*

While the laboratory does not present any more conclusive experiments than those showing the power of antitoxic serum to prevent and to cure the morbid process caused in animals by the inoculation with the diphtheria bacillus or its poison, yet the question arises as to what extent the conditions of the treatment of experimental diphtheria with antitoxin are similar to those in the use of the same agent in the treatment of human diphtheria WELCH concludes that there is identity in essential points, anatomic and etiologic, between experimental diphtheria and uncomplicated human diphtheria Thus there is no longer any question but that in uncomplicated human diphtheria, as well as in experimental diphtheria, the local inflammation at the site of the infection is caused by the multiplication of the LOFFLER bacillus and that the system's symptoms are due to the absorption .of toxins formed by the bacillus, and, consequently, it would be hard to understand why an agent, such as the antitoxin, which neutralizes the toxins in the animal body should be unable to neutralize the toxic effects of the same substance or substances in human beings At all events WELCH, is firmly of opinion that the results obtained from experiments on animals justify and demand the most thorough and careful trial of this new treatment in human beings

Concerning the nature of the so called antitoxins and their mode of action but little is known There are two prominent theories as to the mode of action of the diphtheric antitoxin, viz , the chemic and the vital The chemic theory holds that the antitoxin directly neutralizes in a chemic sense the toxins Experimental evidence, however, is in favor of the vital theory that the antitoxin acts through the agency of living cells and that it probably renders the cells tolerant of the toxins

Antitoxic serum exerts no bactericidal effect upon the diphtheria bacillus, and virulent bacilli may persist in the throat days and even weeks after recovery, after the use of the antitoxin

The *dosage of the antitoxin* in human diphtheria is empirical The main factors in determining the dose are the age of the patient, the duration and the severity of the attack In this way it can easily happen that an insufficient dose is given and it is now well understood that in the early period after the introduction of serum entirely insufficient doses were used

The most important difference between experimental and human diphtheria is the fact that, while experimental diphtheria is a single, pure infection, human diphtheria is often complicated with mixed infections, the most common complicating microorganism being the streptococcus pyogenes Thus

Reiche found the streptococcus in the kidney and spleen in 45.2 per cent of forty-two autopsies on cases of diphtheria in which Loffler's bacillus had been demonstrated during life; streptococci and staphylococci were found together in 64.3 per cent of these cases; these results indicate significantly the frequency and earliness of the mixed infection. There can be no doubt that the remedial rôle of the antitoxin is materially restricted by its inability to combat streptococcus sepsis, broncho-pneumonia and other forms of secondary infection. It is also a well-known fact that all necrosis and changes in the nerves may occur very early in diphtheria, and it is, of course, evident that the antitoxin can not restore cell life or repair degenerated nerves when such retrogressive changes have occurred before its use. A knowledge of these conditions will emphasize the importance of sufficient dosage and timely administration of the antitoxin.

Having considered the experimental basis and the theories of action of antitoxic treatment, the importance of early use in sufficient doses and some of the pathologic relations of human diphtheria, Welch turns his attention to the evidence at hand concerning the efficacy of the new treatment. He finds that the general impression of clinicians who have had good opportunities to observe the effects of antitoxin is overwhelmingly in its favor and cites the observations of Baginsky, Heubner, Ganghofner and others, who all express favorable general opinions. But general clinical impressions do not furnish any strict scientific proof of the value of a therapeutic agent; here statistics are necessary. Welch has collected 7,166 cases from eighty different sources and it is not necessary to state these have been gathered with all possible accuracy and that they are considered from various points of view, in order to eliminate all the possible sources of error with which statistical results nearly always are vitiated.

Of these 7,166 patients with diphtheria treated with antitoxin, 1,239, or 17.3 per cent died. The previous or simultaneous mortality of cases not treated with antitoxin is stated in forty-six of the reports, which contain 5,406 cases treated with antitoxin, with 1,008 deaths, a fatality of 18.6 cases. Estimating the number of deaths in these cases upon the basis of the previous or simultaneous fatality for each group, there would have been 2,279 deaths, or 42.1 per cent. *There was, therefore, an apparent reduction of case mortality by the use of antitoxin of 55.8 per cent.* Separating the hospital cases from those occurring in private practice, the unusually low death rate of 18.7 per cent is obtained for hospital cases. Welch finds no reason to believe that the low percentage of fatality of diphtheria treated with antitoxin can be referred in any large measure to the prevalence of an unusually mild type of the disease. He does think, however, that a large number of cases are received for treatment in the earlier stages of disease now than formerly, and that for this reason the antitoxin statistics can not always be suitable for comparison with statistics based upon the former treatment of diphtheria, inasmuch as it is universally admitted that any good treatment of this disease gives better results the earlier it is begun. This factor just alluded to is not adequate, however, to explain the great reduction in fatality obtained with the antitoxin.

Roux's analysis of his cases show very clearly that, as would be expected, the serum is far more efficacious in diphtheric anginas and croup which yielded pure cultures of the Loffler bacillus than in those which gave in addition cultures of other pathogenic bacteria. The reports from private practice collected by Welch, give a fatality percentage of only 6.9.

In a second table is shown the fatality in operated and non-operated cases of diphtheria treated with antitoxin. Of the 4,294 cases of this table, 27.2 per cent required tracheotomy or intubation, the fatality in the tracheotomy cases being 39.8 per cent, in the cases of intubation 28.9 per cent, and in the cases of intubation followed by tracheotomy 53.8 per cent. Compared with previous statistics from the same hospitals, this means a reduction in fatality of tracheotomized cases of 34.1 per cent since the introduction of the serum treatment—results that are strikingly favorable to the serum treatment. In the same way it is readily shown that the fatality of intubated cases is reduced 49.5 per cent as the result of the antitoxic treatment. In connection with this, it is to be remembered that the great majority of observers bring testimony of the fact that the stenotic symptoms of laryngo-tracheal diphtheria are relieved without operation in a much larger proportion of the cases treated by antitoxin than by any other method. Von Ranke says that formerly 5 per cent of his stenotic cases escaped operation, whereas now, 33 per cent escape; of Ganghofner's stenotic cases, formerly 12 per cent escaped operation, whereas now, 21 per cent escape.

In his third table, Welch considers the ages of patients treated with antitoxin, and several striking contrasts are presented. Thus the fatality percentage for cases of diphtheria under 2 years of age, treated with serum is 33.3, while it varies 60 to over 80 per cent for cases of the same age not so treated.

Table IV sets forth the fatality according to the day of disease upon which antitoxin is injected. Of 232 cases supposed to have been treated the first day, 5 died; the assumed duration of the disease is, of course, doubtful and in some of the fatal cases in this group the statements of friends and parents were apparently contradicted by the clinical signs and symptoms.

It is very noteworthy that the percentage of deaths in 814 cases, in which treatment was begun before the third day of the disease is only 5 5 According to this table the percentage of deaths in cases in which the serum treatment is begun on the third or fourth days of the disease is nearly three times greater than that in cases treated on the first and second day

The essential harmlessness of the serum has been demonstrated by over a hundred thousand injections, and Welch concludes that should the future show that through some idiosyncrasy on the part of the patient, death might be attributable to the serum, this would probably count for as much as the rare deaths from the use of ether or chloroform The occasional untoward effects of the healing serum, such as erythema or urticaria, are annoying, but, being unattended with danger to life and without serious consequences they do not contra-indicate the use of the serum

The principal conclusion to be drawn from this able and timely article of Welch's is this, that the results of the treatment of over 7,000 cases of diphtheria by antitoxin demonstrated beyond all reasonable doubt that anti-diphtheric serum is a specific curative agent for diphtheria, surpassing in its efficacy all older methods It is therefore the positive duty of the physician to use it

Welch concludes his study with saying that the discovery of the healing serum is entirely the result of laboratory work, that it is an outcome of the studies of immunity and that the discovery was in no sense accidental "It should be forcibly brought home to those whose philozoic sentiments outweigh sentiments of true philanthropy, that these discoveries which have led to the saving of untold thousands of human lives have been gained by the sacrifice of the lives of thousands of animals, and by no possibility could have been made without experimentation upon animals"

THE PARASYPHILITIC NEUROSES

Whatever the syphilographers may say, the opinion is growing among neurologic specialists that a number of disorders of the central and peripheral nervous system that have up to within a recent period been attributed to other causes, are, in the great majority of cases at least, to be considered as the late results of syphilitic infection First among these are to be counted locomotor ataxia, which careful and reliable observers like Erb, Dejerine, Marie and others find to have been preceded by specific infection in at least 90 per cent of all cases, and paretic dementia, which has, according to the latest reliable statistics of Regis, Savage, Kowalevsky, Hougberg and others a hardly less percentage of similar antecedents, and which Möbius goes so far as to say will only be met with in those who have previously had syphilis Then we have the special type of progressive muscular amyotrophy described by Raymond, which seems to be always preceded by syphilis, to say nothing of the large numbers of cases of neurasthenia, epilepsy, etc, that follow syphilitic infection at a more or less late period and for which no other rational etiologic factor can often be discovered

All of these disorders are treated of by Fournier in a work ("*Les Affections Parasyphilitiques*," Paris, 1894,) that appeared last year, but that has not received quite all the attention it merits The reputation of its author as a syphilographer, belonging rather to the camp of those who seem the less inclined, as a rule, to admit the connection of syphilis with these disorders, ought to give the work much more weight than would otherwise be allowed it, and the additional fact that he has frankly admitted a change of view from that formerly held by him should in no way disparage it Perfect candor should be universal in science, but it is not yet so absolutely commonplace that it is unjustifiable to commend it In matters incapable of accurate mathematical demonstration there is always room for a play of prejudice, for the selection of acceptable and the rejection of objectionable facts It is perhaps in part due to this, that the acceptance of the syphilitic origin of these disorders is so limited as yet, syphilis is an objectionable disease and it is not satisfactory to have to attribute to it disorders that have heretofore been supposed to have other origins

The arguments employed against this view are principally two, first, that the lesions of syphilis are absent, and, second, that the inefficiency of specific treatment is an evidence that the affections are not of a specific nature The weakness of both of these is well shown by Fournier in his reference to the pigmentary syphilide, which is commonly reckoned among the tertiary manifestations, as a typical instance of a parasyphilitic affection It is a little remarkable, however, that in his review of the evidence of the parasyphilitic nature of paresis, he lays no stress on the not infrequent phenomenon of conjugal paresis, husband and wife both affected simultaneously or in succession with the disorder, though, as is quite often the case, without any admission of syphilis by one or both parties This common difficulty of obtaining the facts as to syphilis gives a special value to the statistics on which the belief in the parasyphilitic nature of these affections is based As regards this particular disorder, it is safe to say, from common clinical experience, that the positive testimony invariably understates the facts The fact that the lesions, so far as known of these conditions, are not syphilitic proves nothing, as it is only asserted that they are parasyphilitic, connected with syphilis, a remote consequence of the infection not

Jersey, offered amendments to the Code, just such in part as had been indefinitely postponed These amendments were properly admitted and placed on file for action at the Baltimore meeting But lo! at Baltimore a new parliamentarian is in the chair and new and unwarranted rulings are rendered

After postponing indefinitely all amendments to the Code, like amendments were again offered The Chair ruled that it was out of order to offer like amendments to those postponed at this meeting Herein he was wrong and everybody who sustained him was wrong As I understand it, Dr Priestly offered an amendment that was to lie over until next meeting according to the law He had the right to offer amendments at that meeting couched in the identical language of the amendments postponed He would have the right to re-introduce the same amendments at each meeting for the next forty years if they were defeated thus often Re-introducing an amendment in this manner does not revive action at a given meeting on a matter that has been indefinitely postponed There would be no action whatever taken on re introduced amendments but to state the same to the assembly and place them on file

The judgment of some of the members who so pertinaciously oppose any revision of the Code has been slightly warped, insomuch that they deem any tactics warranted, whether regular or irregular, in order to down "Banquo's ghost" One eminent member used the following unwarranted argument "The *only way* in which subjects of the same character can be re-introduced at this meeting, after having voted for indefinite postponement, is to vote a reconsideration of the vote of postponement, and then we will get that before us" This argument was made against the reintroduction of an amendment by Dr Priestly

The language just quoted is correct parliamentary law when properly applied, but it was not applicable to the case in hand A motion indefinitely postponed by a deliberative body is forever dead unless revived at that same session by a vote to reconsider There being no vote to reconsider, carried, then the only method by which the same subject can be brought before the body, at a subsequent session, is by offering it anew, the same as on former occasions, and that can be done immediately in any case which must necessarily lie over to a subsequent meeting for action

Possibly, since our parliamentarians are growing in knowledge, by next year it will be ruled that, when a question has been indefinitely postponed, it can *never* be revived or reintroduced Who can tell? Cushing and Roberts "are not in it" Such decision would be a boon to the veterans who have assumed the task of handing down the creed to future generations just as it was delivered to the saints from the pen of the immortal Percival They could then sleep in peace

Let us have correct parliamentary rulings at the meetings of our Great AMERICAN MEDICAL ASSOCIATION

A C SIMONTON, M D

Another Side of the Life Insurance Question

LA FAYETTE, IND, Oct 2, 1895

To the Editor —Allow me to call attention to the communication of Dr John L Davis, Medical Director of the Union Central Life Insurance Company, Cincinnati, which appears in the JOURNAL of September 23, page 524, in order to speak briefly in behalf of the members of the common herd in the profession who are interested directly and indirectly in the subject of professional work for life insurance companies I am glad that the Doctor has discussed, in a public way, the practical side of the life insurance question in its relation to the medical profession, for I do not know of any one professional topic that needs it more

The perusal of the Doctor's article gives me the impression that its author is only practically familiar with the whole question theoretically, and that his opinions and estimates of the local examiner have been affected, if not infected, by the gossip and statements of interested, and in some instances, of unscrupulous agents Frequent meetings with examiners, socially and professionally, at varying intervals, has led me to believe that they do not exercise their powers of speech as frequently and freely in the interest of truth and a good all-round understanding as often and as thoroughly as they ought to, because they think it injudicious in a business way to do so, they are so dependent on the agent for position and business

As to the Doctor's paper With his observations and statements as to the scope and purposes of a complete practical physical examination, I have nothing to say

First, then, let me direct attention to the commercial phase of the subject and his statement, "that while physicians are receiving as fees from insurance companies and cooperative associations about $2,500 000 per annum, they are not in every instance giving a *quid pro quo*" The statement that the local medical examiner does not in *every* instance give an equivalent in work for the fee paid is, no doubt, true, but the paper would have been more instructive to all of us if it had stated what per cent of examiners failed to furnish satisfactory reports of their work, or failed to do good valuable work, and specified wherein their reports were defective

In view of the statement in the paper of the expenditure of such a large sum of money, I would like to ask what proportion of the $2,500,000 the Union Central Life Insurance Company pays its local medical examiners? What per cent of this large sum of money goes to the local medical examiners and what to the medical director? As the late Dr McIlvaine, of Cincinnati, would say "Let us have the facts" Detached general statements, like the one cited, prove little if anything, they are unsatisfactory

Since nearly all firstclass life insurance companies pay the examiner $5 for each applicant examined, and the Union Central, Dr Davis' company, only pays $3, I think the citation in this connection against the local examiner is not altogether timely, if fair

The local examiner frequently finds it a very difficult undertaking to "fully sympathize with the agent," when that individual makes himself a disagreeable visitor in his office as he sometimes does, or when he solicits, hints that his company wants, yes, expects him to take out a policy "with us," and to let the physical examinations of applicants pay the premiums, or when he objects loudly, offensively it may be, to the examiner's record of facts, etc, etc, in a given examination As a class, solicitors for life insurance are gentlemen, but the most uncivil man I ever met in a business way was an agent for a life insurance company If an agent is disagreeable or seeks to obtain an advantage for his company through the examiner, the latter is sure to come in for a share of abuse and misrepresentation, for the interests of the examiner and agent in the presence of a difference lie in widely divergent directions

The defective work done for the Union Central Life Insurance Company by its local medical examiners is probably due, it seems to me, to the low fee paid by the company Three dollars, the fee allowed for a complete physical examination of applicants for insurance with the company he represents can hardly expect to secure firstclass professional talent, or if it does secure it, to expect it to exercise "the greatest tact and skill in drawing out and properly weighing every feature required for a perfect report" Is it natural to expect a qualified physician to be at all times "tactful and approachable, willing to display a sympathetic *camaraderie*, putting the applicant at his ease, and by his manner, if not by word, commend the applicant's motive in taking insurance incidentally perhaps speaking well of the company and a good word for the agent?" "The examiner must honestly and earnestly believe in insurance and his company, and must fully sympathize with the agent in his difficult task" Can a firstclass physician do all this for each applicant and be accessible for such work at all times, and do it honestly for $3 and not sacrifice his dignity in some degree as a physician in Dr Davis' estimation?

Knowing that his neighbor examiner receives $5 for an examination for his companies, the examiner for the Union Central Life Insurance Company feels that he is not fully appreciated, that the company takes an advantage of him, obliging him to work for less than he is worth, for less than the work is worth if it is done "honestly and earnestly" An old physician, independent, positive, original, told me lately that he always gave the insurance company that brought an applicant to his office for examination for $1, one dollar's worth of work and no more, for $2 or $3, work in proportion to the fee and no more Of course this remedy is impracticable, even dishonorable, and could not for a moment be held up as a rule of action against the wrong

The AMERICAN MEDICAL ASSOCIATION has declared that the fee for each complete physical examination for life insurance *should be $5, and not $3, as the Union* Central Life Insurance Company obliges its local medical examiners to accept or go out of its service

I have wondered if the above statements would not furnish a partial explanation, if not a complete one, of the discussion of "The Fool Doctor," by the underwriters of his *company in convention, and if their discussion of this subject* in his presence was not a mute appeal to him to employ *at the customary rates, firstclass discreet physicians* for local medical examiners

Is not the fee for work for each applicant examined, that is, the *honorarium*, the mark and degree of business or professional esteem in which the examiner is held by the company? If Dr Davis will look into the home office of his company thoughtfully and *judicially* he will no doubt discover the chief cause of the ills which he describes so graphically in his paper, and which caused the agents to ridicule members of his profession, and, having discovered it, the remedy will readily suggest itself

Finally, permit me to inquire if the small fees paid physicians for professional work nowadays by insurance and railroad companies are not one of the leading causes for the unsatisfactory social position of the medical profession in this country? Small fees, too, I think has much to do in dividing medicine into many specialisms for gain rather than for study or investigation, as well as creating the army of self selected specialists regulars as well as irregulars

Yours respectfully, W W VINNEDGE, M D

Blood Poisoning—Alcohol

ORAN, MO., Sept 30, 1895

To the Editor —To write a readable article on blood poisoning requires considerable medical knowledge and a very vivid imagination Witness recent articles in the JOURNAL Many maladies come within the scope of this heading All contagious diseases (and many non contagious) So does la grippe, malaria, pneumonia, etc The field is large and there is much speculation along this line

The ancient medical philosopher believed in blood contamination and wrote much in defense of his belief To say that he drew largely on his imagination is to put it very mildly The modern physician is in the same category He believes in blood poisons, too, but he thinks it silly to say of him that he does not know exactly what he is talking about when he uses the term He can (so he thinks), point out the particular poison in each case He calls these poisons, *germs* And by the aid of his microscope and his imagination, he gives each germ its form and other characteristics by *which it can be known* He will also, without being asked, tell you how these poisons originate how they act, and how to get rid of them But when he has a case to treat and reports results, it seems that it takes him just as long to relieve the case as it does one who does not claim so much and such wonderful knowledge If driven from his position on the germ theory, he begins to talk learnedly of ptomaines and leucomaines, he will tell you that it requires an expert in the use of the microscope to discover and analyze germs, but that he is able to see and analyze the *debris* of these so-called disease producers

One doctor insinuates that he, by examination of the urine, can tell what effect alcohol has had in a given case Much is being written in condemnation of alcohol as a remedy Why? Not because it is harmful as a *remedy*, but because it does so much harm as a *beverage* Alcohol is condemned because it is not a "tissue builder," not a "stimulant," not a "food," but a "paralyzer" Antifebrin is not a tissue builder, nor a stimulant, nor a food, but a paralyzer Chloroform, ether, chloral and a host of other remedies all belong to the same list I see mercury is recommended for alcoholic rheumatism I wonder if alcohol would not be *good for mercurial rheumatism? Is mercury a tissue* builder, a stimulant, or a food? Neither, but a very useful remedy nevertheless

Now to the subject again Alcohol in large (poisonous) quantities poisons the blood, *en masse* So does morphin, chloral, chloroform, iodin and a host of other poisons The old time doctor knew this, and he undertook by the use of the lancet to remove the blood and with it the poison He also knew that poisons were removed *from the system in* gaseous form from the lungs, in fluid form from the skin and kidneys, and in solid form from the bowels—hence his frequent use of expectorants, diaphoretics, diuretics and purgatives He also discovered that *one poison would sometimes* neutralize another, not because they were animals that would fight and destroy each other, as the modern writer would have us believe, but by a chemic process they were made harmless The modern writer would do so much better if he "did not know so many things that were not so"

I wish to correct the writer who teaches that drunkards are made in the sick room Most drunkards are such, long *before they get sick* Alcohol is not being prescribed too much by the regular profession Drunkards prescribe and use it for all kinds of maladies It has a legitimate place in medicine Its worst enemies among the profession admit that it is a pain obtunder As such, it has few equals It is transient in its effects in medicinal doses—is quickly *thrown off from the lungs, skin and kidneys*, promoting the action of each In larger quantities it neutralizes other poisons and aids in ridding the system of them Much of the good effect of fluid extracts is because of the alcohol they contain Alcohol, as a remedy and a preserver of other remedies, has come to stay I have no objection to the fight that is being made against intemperance—I am a total abstainer—but I shall prescribe alcohol whenever I think it is *indicated*, never for well people, but in all cases of sickness for which it is needed The harmful effects so abundantly portrayed by writers for the JOURNAL, are those of drunkenness combined with starvation, vice, exposure and other calamities that befall the drunkard

The reader will do well to look after *excretion* in all cases where the blood is contaminated Do not forget the known antidotes, and do not believe everything you see written in the JOURNAL It is much easier to guess than to know, and writers are too much given to telling plausible stories not founded upon facts The germ theory, with all its concomitants, has got to go It has been "weighed in the balance and found wanting" Its adherents, like those of the lancet, will have to take a back seat

Respectfully submitted, W P HOWLE, M D

New York Pasteur Institute

NEW YORK, Oct 1, 1895

To the Editor —In perusing the JOURNAL for August 10, I find an account of a visit to the Pasteur Institute of Paris, by Dr Casey A Wood in which he writes, on page 250, as follows

"By the way, Chicago is the only Pasteur station except, I believe, Havana and New Orleans marked on the large map of America at the Institute I could not discover why New York, with Gibier's *station had been omitted*"

Will you allow me to remark in answer to this note that when the map above mentioned was made, there was no station either in Chicago or New York, but at the Pasteur Institute it had been said that a station was going to be started in Chicago *For some reason or other*, no institution was started at the time in Chicago, but a special mark was made on the map indicating that there was a station there It was only about two years later that I started the Institute in New York, and six months afterward Dr Lagorio started another in Chicago, but since, no change has been made on the map However, to avoid any comment on this matter, I hope that the Directors of the Paris Institute to whom I have submitted the facts, will make the necessary addition upon this map Yours truly, PAUL GIBIER

It was Dr Fish, and not Dr. Burgess

MILWAUKEE, WIS, Oct 5, 1895

To the Editor —In your issue of the 5th inst, you state on page 578 that Dr A J Burgess of Milwaukee said "so and-so" These remarks, abbreviated though they be, were mine I believe I am the only Fellow of the American Association of Obstetricians and Gynecologists in this State—and at least the only one present at this discussion I most decidedly object to your quoting some one else for me, or your attributing remarks to me made by another

Yours truly, E F FISH, M D

The McDowell Biography

NEW ORLEANS, Oct 4, 1895

To the Editor —Some time ago, over one year, a lady came to my office soliciting subscriptions to the biography of Ephraim McDowell, M D, claiming among other things, that she was a distant relative of the Doctor I find my receipt for the price of said book, but no book yet I do not believe the Doctor would approve of such slow treatment or action As I have not her address, and I noticed some time since you had, would you kindly send this to her, or to those in charge of publication, and oblige, S L HENRY, M D

Some Recent Comments on the Journal

THE OPINION OF AN OLD MEMBER

LE MARS, IOWA, Sept 8, 1895

To the Editor —Your publication of letters on the line of "What I know about the JOURNAL," is correct, and some of the criticisms are good There is an abundance of medical periodicals of the "featherweight" variety in existence, such as would suit quite a sprinkling of our profession, but for physicians who are eligible to membership in the AMERICAN MEDICAL ASSOCIATION, a journal like ours is not too scientific or too heavy If all those who now disagree with me will but read the JOURNAL for a few months, they will soon feel the necessity for that class of medical literature A page or two each week of light practical reading, as suggested by Dr Towler, would certainly not be considered amiss by any one, and might make the JOURNAL more popular with some As long as we have our editor to act as sifting committee, there will be no danger of articles finding their way into the JOURNAL which would make it a laughing stock to the profession or to other periodicals I have in my library every issue of our JOURNAL, from No 1 to the present, and could not spare a single number PAUL L BRICK, M D

FROM A HEALTH OFFICER

WOOSTER, OHIO, Oct 1, 1895

To the Editor —What seemed more than an herculean task a few months since—and it was even doubted whether it could be done—the editing of the JOURNAL, is now grandly accomplished The JOURNAL to day is the best educator the profession in America has ever had

Glance over the articles it has contained for three or four months last past! Many of them are exhaustive on the subjects they discuss, and some bring to light new truths of great value to the profession

Accept my congratulations for your past success and my earnest wishes for your future usefulness Fraternally,

JOSEPH E BARRETT, M D
Health Officer

HE COMPLIMENTS THE JOURNAL

COLUMBUS, OHIO, Oct 5, 1895

To the Editor — Permit me to compliment you on the JOURNAL in general, and particularly on your editorials The editorial of two weeks ago on Basedow's disease I think especially good While you did not solve the secret of the etiology and seat of that mysterious malady, you presented all that is known in a condensed and scholarly manner

STARLING LOVING, M D

DR QUIMBY'S OPINION

To the Editor — As time rolls on, our JOURNAL grows in value and importance, and if no obstacle is thrown in the way, is destined to be one of the greatest medical lights and journals of the age I N QUIMBY, M D

NECROLOGY

JOSEPH C GORDON, M D, of Mt Vernon, Ohio, October 2, aged 54 He was born in Chester County, Pa, and went to Knox County, Ohio, in 1858 He served through the Civil War in Company A, 20th Regiment O V I, and was prominent in Masonic circles ——Wm H Gibson, M D, of Chariton, Iowa, October 3 ——E P Gaylord, M D, of Alameda, Cal, September 27, aged 61 He was formerly from New York and had lived in Alameda nearly three years ——F M Everett, M D, of Corydon, Iowa, September 29, aged 65 ——James Collins, M D, of Philadelphia, October 7

PUBLIC HEALTH

Pollution of the Passaic River, New Jersey —According to the *Sanitarian* for August the health authorities of Passaic, N J, have passed resolutions declaring that the pollution of the Passaic River by sewage and manufacturing refuse from the cities of Passaic and Paterson has reached the danger point Every summer, City Physician Terhune says, there is an epidemic of malarial fevers among the residents along the river and the Dundee Canal, which the river supplies The board called on the two cities to take steps to diminish pollution The board advocates the building of a trunk sewer from Paterson to the sea

Cost of Cremation in New York —The charge for cremating the body of an adult in New York city is $35 and for that of a child $25 Urns or vases vary in price from $6 to $45, the former are of bronze and white metal, the latter of serpentine stone, marble, etc For $25 a niche may be bought in the crematory where the urn will be cared for, or it may be taken possession of by the family About one-half are said to be kept at the crematory, some are taken away and placed in safety deposit vaults and others are kept among the most sacred treasures of the home A newspaper report has it that one relict carries the ashes of her deceased husband wherever she goes—to Europe and back several times and frequently to the seashore and mountains It is not stated what rate of fare is charged for the "remains"

The New York City Board of Health's New Regulations —The New York Board of Health has adopted rules for the prevention of the spread of contagious diseases among public school children These rules decree that slates and slate pencils shall be abolished, and pens and pencils substituted, the latter to be kept in separate boxes by each pupil All the school property of a child ill with a contagious disease shall be turned over to the health board Books that are taken home shall be re covered with brown paper once a month Each class must have its own covered pitcher for drinking water, and each pupil a separate cup In cases of contagious disease in a family, the children are at once to be excluded, and teachers are to report weekly to the board the names and conditions of pupils who are ill All teachers and principals shall be forbidden to send any pupil to the home of another pupil for any reason Circulars of instruction to the Board of Education on those matters, and also to principals, are in the course of preparation

Another Attack on American Live Stock —A London cable dispatch of the 5th inst , reports that the English agricultural papers are raising an outcry against the free admission into Great Britain of American sheep A recent consignment of sheep from America was found to be suffering with scab, the spread of which disease in the United Kingdom is due, according to the *Live Stock Journal*, to the importation of sheep from the United States Many of these sheep were dispersed over the country for grazing and they spread the disease The paper says that the Board of Agriculture must therefore be asked to issue an edict, similar to that applied to cattle, providing that American and Canadian sheep shall be killed at their port of landing Secretary Morton will investigate the foundation for the charge, which will probably be found to have its origin—as in other legislation hostile to American food products—in purely commercial reasons and not in any keen concern for the public health

Dr Dana on the Saddle —Upon what shall the rider sit? With all the world a-wheel this is certainly a question fundamentally touching the public health, and our esteemed confrère, Dr Charles Anderson Dana of *The Sun*, who has so long been in the saddle in more than one sense, discusses it in his usual profound and instructive fashion Especially is he concerned about the proper saddle for women He points out that in this feature of the bicycle's construction the pommel is high, it interferes with the dress and chafes the body, and if this part is tilted downward one slides forward on to the narrow shank of leather and the comfort of wheeling is destroyed , stout women condemn the narrowness of most saddles, while many of less weight object to a seat of more than ordinary width , out of fully a score of saddles that are satisfactory to men, not one is pronounced good by the mass of women , not one, they say, is adaptable by any possibility to woman's structure , in short, while the saddles of to-day suit wheelmen, they positively do not suit wheelwomen, and hence they must be condemned Dr Dana then proceeds to consider the essentials of a perfect bicycle saddle for either man or woman 1, one that shall maintain the body in an easy and proper position , 2 one that shall afford the rider a firm, yet elastic, seat , 3, one that shall allow pedaling without needless friction The cycling sisterhood do not demand a saddle with upholstered arms in which to recline at will, but one conforming to their bodily requirements, and from which the machine may be propelled with facility and comfort " In these days of reform will not," he asks, ' some one of our fair readers with masculine ingenuity and feminine sense of personal comfort, invent a reformed bicycle saddle? We shall hail the advent of so important a factor to our sisters seeking health and pleasure on the wheel "

A Report on Malarial Fever in New Jersey —According to *Public Health*, August, Dr J C Smock, the State Geologist for New Jersey, has summarized the facts as to the origin and means of preventing malaria in New Jersey under the following heads 1, malarial fevers prevail over that part of the State which lies north of the terminal moraine, wherever the conditions are favorable to it 2, there is a remarkable absence of malaria in the country south of the terminal moraine, excepting localities and districts of limited extent, where aggravated conditions of its determination exist , 3, the existence of malaria is not necessarily due to a geologic formation, but to a sub surface condition, common in the country which is north of the terminal moraine, and covered more or less by glacial drift , 4, the element of imperfect or disturbed under drainage is a more potent condition in determining malaria than any other , 5, the thorough under draining of a district or tract is the most practicable and most effective means in order to amelioration and protection , 6, the distance to which the malarial poison may be carried by winds or air currents is comparatively short, and not over hills and mountains miles away, as often popularly stated , 7, belts of forests, and even hedges, tend to arrest this conveyance of malaria by winds One instance was cited where, in the northern part of the State, a hedge is reported to have prevented malaria The hedge was cut down and the whole family was taken sick with malarial disease The occurrence of malaria or its distribution areally in New Jersey seems to be explained by these conditions of sub surface drainage and the essential factors of heat, moisture, and dead vegetation, and not by wind transmission, otherwise there would be greater uniformity in the occurrence, instead of the irregular distribution We have here a fever stricken locality, and there an area free from it Referring to the Great Meadows of the Pequest Valley, in Warren County, the testimony of intelligent laymen there resident led the writer to believe that there is no malaria there Formerly this valley was "full of it," as one said, "nearly every one had the shakes" The beneficial effects are attributed to the lowering of the bed of the Pequest River and the more rapid delivery of its waters Where formerly were wide spread inundated lands and a sluggish stream with scarcely a perceptible current there are to day productive gardens and a swift current The possibility of future outbreaks was suggested by the writer until the whole tract has its ground-water lowered sufficiently to make a well drained soil and subsoil, as well as a thorough surface system of drainage

Health Reports —The following health reports have been received at the office of the Supervising Surgeon General, Marine Hospital Service

SMALLPOX—DOMESTIC

Louisiana New Orleans, September 21 to 28, 11 cases, 1 death

Michigan Smallpox reported at Battle Creek, Battle Creek Township, Bedford Township, and Detroit

Nevada Carson, September 15 to 17, 15 cases

SMALLPOX—FOREIGN

Cairo September 3 to 9, 2 deaths
Calcutta August 17 to 31, 2 deaths
Buenos Ayres July 1 to 31, 24 deaths
Barcelona August 1 to 31, 8 deaths
Dublin, September 14 to 21, 5 cases, 1 death
Gibraltar, September 8 to 15, 1 case
London, Eng September 14 to 21, 2 deaths
Montevideo August 3 to 10, 1 case , August 17 to 24, 4 cases, 1 death
Naples September 14 to 21, 3 cases, 3 deaths
Odessa September 7 to 14, 1 case
Prague September 7 to 14, 2 cases
Rio de Janeiro September 3 to 10, 81 deaths
Tuxpan September 7 to 14, 3 deaths
Warsaw September 1 to 14, 2 deaths

CHOLERA

India Bombay, August 27 to September 1, 8 deaths Calcutta, September 17 to 31, 17 deaths

Tangier September 15 to 21, 79 cases, 46 deaths

Austro-Hungary Tarnopol September 3 to 9, 14 cases, 5 deaths , Tarnopol District, September 2 to 9, 3 cases, 1 death , Brody District, September 1 to 2, 1 case, 1 death , Robatyn District, September 2, 4 cases, 4 deaths

France Paris, September 1 to 7, 1 case, 'choleriform affection "

Russia Volhynia Government, August 4 to 10 1,004 cases, 822 deaths , August 11 to 17 2,025 cases, 718 deaths , August 18 to 24, 2,497 cases, 944 deaths , August 25 to 31, 3,352 cases, 1,190 deaths

Cases are also reported from districts of Ostrog, Kremenetz, Saslow, Starokoustantinow, Nowogradwalyuski, Dubno, Rowno, Luzk, Shitonir and Kowel

Turkey Aleppo August 21 to September 4, 35 cases, 18 deaths , Brussa (city), August 29 to September 1, 88 cases, 37 deaths , Brussa (vilayet), August 24 to 30, 32 cases, 16 deaths Diabekir (vilayet), August 24 to September 1, 77 cases, 77 deaths , Adana (vilayet), August 23 to 27, 1 case, 2 deaths

Japan April 18 to 30, 99 cases, 28 deaths , May 1 to 31, 665 cases, 514 deaths , June 1 to 30 3,573 cases, 1,931 deaths , July 1 to 31, 7,575 cases, 4,891 deaths , August 1 to 2, 810 cases, 553 deaths

YELLOW FEVER

Cuba Cienfuegos, September 22 to 29, 8 deaths , Havana, September 19 to 26, 70 cases, 22 deaths Sagua la Grande, September 14 to 21, 4 cases, 1 death

Mexico Vera Cruz, September 19 to 26, 4 deaths

Brazil Rio de Janeiro, September 3 to 10 7 deaths

MISCELLANY.

Addresses Wanted—Dr F Meyer, JOURNAL returned from Baltimore, Md Dr M Perl, JOURNAL returned from Houston, Tex Dr L Smith, JOURNAL returned from Chattanooga, Pa

South Dakota Blind Asylum—The Legislature has established an institution to be known by the foregoing name and located at Gary, in Deuel County The State Board of Charities and Corrections are to have charge of it and of the employment of superintendent, attendants and instructors

Massachusetts Pharmacy Laws to Be Codified—A resolution was passed by the General Court, or Legislature, of Massachusetts, providing that the board of registration in pharmacy cause to be codified, consolidated and arranged, all laws now in force relating to the regulation or practice of pharmacy, and all laws which it is the duty of the members of the board of registration in pharmacy to enforce Such codification, consolidation and arrangement shall be reported to the general court on or before Jan 1, 1896

Anti-American-Alliance Serum—The epidemic that is carrying off so many of the English titled "eligibles," who fall a ready prey to American beauty and bullion, leads London *Truth* to offer this delusive hope to the British matron with daughters of her own to marry off "After years spent in laborious and learned research, Prof Padmore Brown claims to have discovered a serum, a hypodermic injection of which will preserve young men of position against marrying Americans If the serum really possesses the property which the Professor declares it has, this will undoubtedly be one of the most important discoveries of the century No mother with eligible daughters and no unmarried woman would, in that event, ever be without one of the hypodermic syringes filled to the nozzle with anti-American-alliance fluid"

Provision Made for North Dakota Blind Asylum—The Legislature of North Dakota at its last session established a blind asylum, to be located at Bathgate, that State The government thereof is vested in a board of five trustees, to be nominated by the Governor and confirmed by the Senate The 30,000 acres of land donated by Congress for the purpose of such blind asylum and appropriated by the constitution of the State for it, and all moneys received from the interest and income derived from the sales of such lands or rents derived from the leasing of such lands, are appropriated for the construction and maintenance of this asylum

Synthetic Alcohol.—Now that acetylene can be made industrially upon a cheap scale, the question of preparing alcohol synthetically is again being agitated Indeed Caro (*Pharm Centralb*), while finding previously published methods insufficient, claims to have devised a process which eventually may lead to the desired results He passes acetylene through concentrated hydriodic acid, thereby obtaining nearly 60 per cent of CH_3CHI_2 This, when boiled with concentrated solution of potassium hydrate, yields alcohol, acetylene and potassium acetate —*Western Druggist*

Methyl Salicylate in Senega Root—Rubner having noticed (*Pharm Jour*) that a certain sample of senega root had a distinct odor of gaultheria, attributed this to sophistication, but Goldener states that, under certain conditions, many plants of the polygalaceæ contain methyl salicylate, and therefore the supposed adulterant is a natural constituent of the root C Dunnenberger points out that the Swiss pharmacopœia has adopted the salicylic acid in senega root as a test of identity, thus asserting its existence as a normal constituent of the root —*Western Druggist*

Society Notes.

THE annual meeting of the Minnesota Academy of Medicine was held in St Paul, October 2 The following officers were elected for the ensuing year President, A E Senkler, St Paul, Vice-President, W A Jones, Minneapolis, Secretary, R O Beard, Minneapolis ——At the annual meeting of the Tri-State Medical Society held at Des Moines, Iowa, the following officers were elected President, D C Babcock, Chicago, First Vice-President, A H Cordier, Kansas City, Mo, Second Vice-President, W A Todd, Chariton, Iowa; Secretary, Geo Cole, St Louis The next meeting will be held in Chicago ——The first annual meeting of the Utah State Medical Society was held in Salt Lake City October 1, under the presidency of Francis L Bascom ——The Utah County Medical Society was organized in Salt Lake City September 28 The following officers were elected President, W E Pike, Vice-President, M H Hardy, Secretary and Treasurer, F W Taylor

Cleveland Notes

THE students of the junior class in the Medical Department of the University of Wooster at Cleveland have organized a "Pathological Journal Club," which has for its chief object an instruction in the methods of literary research by bringing the students into contact with the current literature bearing upon pathology and bacteriology in connection with their required class-room and laboratory instruction in these subjects

At the first meeting of the club, held Thursday evening, October 3, Mr Morris Schott read his detailed translation of a paper upon "The Etiology of Rheumatic Tetanus," by Carbone and Perrero, which appeared in the *Centralblatt für Bakteriologie* of August 31, 1895, Mr J J Fleming read an abstract of "Notes on Bacillus Coli Communis and Related Forms," by Theobald Smith, from the *American Journal of the Medical Sciences* for September, 1895, and Mr R G Schnee gave an abstract of an article by E O Jordan, "On some Conditions affecting the Behavior of the Typhoid Bacillus in Water," from the *Medical News* of Sept 28, 1895

The club elected Dr A P Ohlmacher president, and Mr A L Smith secretary The meetings will be held bi-weekly

Louisville Notes

G A R REPORT—The report of the Medical Director, Dr W H White, of the workings of his department during the National Encampment of the G A R has been submitted to the Citizens' Committee The workings of the department have been recorded in these columns previously Reports were returned each day by the various chairmen in the different wards, giving the name, residence, post, disability, where quartered and what disposition was made of the patient From these reports it appears that 284 cases were cared for; 98 of these occurred during the grand parade day, being prostrations from the excessive heat It is a great wonder that many more of the old veterans did not succumb, as the thermometer reached the 98 degree mark, and the sun beat down from a cloudless sky Thirteen were cared for at the fireworks, mostly bruises from an accident to the seats erected on the river front, and thirty were prostrations at the barbecue The expenses of the medical department amounted to $556 98, quite a balance being left over from the liberal allowance made by the Board of Control It is gratifying to announce that not a single death occurred during the Encampment, and not a single case of serious sickness or injury among the veterans occurred A most deplorable accident was that which befell the members of the Louisville Legion A squad of men were placed in charge of a gun which was to fire the salute of welcome While proceeding to the selected site, the caisson exploded, and three of the Legion men were killed, and the negro driver They were almost blown to pieces, and beyond recognition

NULL—Dr C W Null died at the City Hospital on the 26th inst He was 42 years of age, having come to Louisville from North Carolina He secured a position as janitor of the Louisville Medical College, and at once began the study of medicine, graduating in due time, and shortly after being elected to the professor of physiology Later, he lectured on materia medica At this time he began to drink, his fall was as rapid as his rise, and he was taken from a saloon, unconscious, to the City Hospital, where he died

LOUISVILLE ACADEMY OF MEDICINE—The regular meeting of this society was held in the Academy rooms Monday evening, September 30 The subject for discussion was 'Texas Fever," introduced by a paper by Dr Cashin

Death Report —The total number of deaths for the week ending September 28 was 72, 41 male, 56 white, 4 died at the City Hospital 3 stillbirths, 10 deaths from typhoid fever 6 from inanition and 6 from cerebral meningitis

American Public Health Association —The President of this Association, Dr Wm Bailey, accompanied by Drs W L Rodman, J M Mathews, President of the State Board of Health of Kentucky, and Dr Carl Weidner, attended the meeting at Denver on the 28th ult

Kentucky School of Medicine —The catalogue of this school for the session 1896 is just out, and shows the following new appointments upon its staff Dr J W Guest, assistant in gynecology and abdominal surgery, Dr Wm P Banta, assistant in the laboratory of surgery, Dr Gavin Fulton, assistant in physiology, Dr Florence Brande, assistant in clinical medicine, Dr Henry H Koehler, assistant in clinical medicine Dr Carl Weidner became associate professor of the practice of medicine, and director of the laboratories of histology, pathology and bacteriology, Dr Henry E Tuley is made an instructor of physical diagnosis, in addition to his charge as chief of medical clinic The election of Dr S E Woody as Dean was mentioned in a previous issue

St Louis Notes

Health of the City —The mortuary report for the week ending October 5 gives 172 deaths, 10 less than during the preceding week, and 29 more than in the corresponding week of 1894 Death rate, 16 per 1,000 There were 27 deaths under the age of 1 year, 48 under the age of 5, 27 deaths were due to zymotic diseases During the week 121 cases of diphtheria and 6 cases of croup were reported, with 15 deaths, 8 cases of scarlatina without mortality, 11 cases of typhoid, with 2 deaths, and 1 case of measles The prevalence of diphtheria is still causing alarm, and the public seems more alive to the need there is for a strict compliance with the instructions of the Board of Health

The St Louis Medical Society —At the meeting of October 5, Dr Sherwood Dunn, late of Pozzi's clinic, demonstrated Professor Richelot's operation for vaginal hysterectomy to an appreciative audience

Free Dispensary Abuses —The city has opened a branch dispensary, and *apropos* of this extension of facilities for medical aid, there is renewed discussion of the abuse of this privilege of charity Plans are proposed looking to the restriction of this charity in the case of the city dispensaries, which are easy of accomplishment, but the abuse of free college clinics is not so easily reached The college is anxious to obtain a sufficiency of clinical material, and is never discriminative in its acceptance of cases, The multiplication of colleges in the city has greatly increased the number of free clinics, and it has now become notorious that a large proportion of the cases seeking aid in them are persons coming from both city and country who are able to pay It is to be hoped that the State Board of Health will hit upon some plan to curtail this evil, which harms the profession quite as much as a superfluity of its own members

The Missouri Medical College —Tuesday, October 1, the new college building was turned over to the trustees, and dedicated with ceremony The new building is situated on Jefferson Avenue, near Washington, and adjoins the old Polyclinic "The building is faced with white limestone, designed in the classic style of architecture and is most delicate in all its details At the entrance two lamps of bronze, set on pedestals, give a most artistic effect In the basement are located the boilers, heaters, and electrical plant The system of heating and ventilating introduced forces the heat throughout the building The sanitary system is one of the most important features in a building of this kind and has been handled in a most satisfactory manner On entering the building the spacious hall connects with the rooms, clinic rooms and a spacious lecture hall The surgical amphitheater is located in the adjoining building with easy access from main hall The second floor contains the biologic laboratory fitted up so that each student has his table with lockers Connecting are the professors' rooms The main amphitheater, with a seating capacity of 300, is located on this floor, with a large stage, connecting with the stage are large compounding rooms and smaller laboratories On the third floor is located a large well lighted reading room, the pathologic, bacteriologic and physiologic laboratories The professors' gallery runs the entire length of the rooms and so located that each student has full view of his doings The dissecting hall is located on the fourth floor, with cement floor and all necessary drains and lighted with an immense skylight

The Duestrow Case —The prosecution of this insane uxoricide is still conducted with a zeal worthy of a better cause The latest move of the prosecuting attorney is the announcement of an intention to attempt to obtain an indictment for murder in the first degree before the St Louis grand jury This is the result of the failure to obtain conviction in the August trial in Franklin County To further prejudice the public, the prosecution conducted a farcical examination in Franklin County with a view to unearth bribery of the jurors who served at the last trial It is a sad commentary upon the administration of justice to realize that the public prosecutor has it in his power to affect the course of the law by cunningly playing upon popular opinion There is an outspoken determination to compass the legal execution of Duestrow, sane or insane

Washington Notes

Annual Report of the Health Officer —The annual report of the Health Officer shows the total number of deaths during the last fiscal year was 5 565, of which 3,114 were white and 2,451 colored The death rate was 16 97 per 1,000 white inhabitants and 28 18 per 1,000 colored, and 20 57 per 1,000 of the entire population The decrease in deaths was 474 The deaths from zymotic diseases numbered 1,086, as against 1,398 the preceding year There were 4,794 returns of births made during the year, of which 2,878 were white and 1,916 colored The births fell short of the deaths by 771 Estimated from the increase of population, probably 5,000 births were not reported, although required by law It is gratifying to note, continues the health officer, that at no previous time for twenty years was the death rate so low The marriages reported were 2,891, as against 1,496 the year before Of these 1,411 were white and 980 colored The estimates appended for the expenses of the fiscal year is as follows One health officer, $8,000 One chief inspector, who shall be a physician and act as deputy health officer, $1,800 Fifteen sanitary and food inspectors at $1,200, $18,000 One sanitary and food inspector, who shall be a practical chemist, and inspect dairy products, $1,800 One sanitary and food inspector to assist chemist, etc, $600 Two sanitary and food inspectors, who shall be veterinary surgeons, and act as inspectors of live stock, dairy farms, etc, at $1,200, $2,400 One inspector of marine products $1,200 One chief clerk and deputy health officer, $1,800 One clerk, $1,400 Four clerks, two of whom may also act as sanitary and food inspectors, at $1,200, $4,800 One clerk, $1,000 One messenger and janitor, $600 One poundmaster, $1,200 Laborers at not exceeding $40 per month, $1,920 Ambulance driver, $480 For rent of office and stable, $1,120 For support of chemic laboratory $1,000 For the collection and disposal of garbage and dead animals, $57 000 For the prevention of the spread of scarlet fever, diphtheria and other minor contagious diseases, including the establishment and maintenance of a bacteriologic laboratory and disinfecting service, to be immediately available, $15,000 Contingent expenses, $4,000 For the erection of an administration building, isolation ward, stable, mortuary and discharging room in connection with the smallpox hospital, and for the equipment of these buildings and of those already erected, $15,000 For the relief of the poor—twenty physicians to the poor, at $480 per annum, $9,600, drugs, printing, etc., $3,700

Columbia Hospital Dispensary Chief —The executive committee of the Board of Directors of the Columbia Hospital have appointed Dr Lewis P Smith chief of the dispensary service

Annual Report of the Coroner.—Dr Chas M Hammett, coroner of the District, has presented his annual report for the past year He makes an urgent appeal for the erection of a new morgue, and asks that $12,000 be appropriated for that purpose The new one in Baltimore cost $4,500, and so the coroner estimates $5,000 for the site, $4,500 for the building, and $2,500 for its equipment

THE WASHINGTON BOARD OF TRADE —At the meeting of the Board of Trade this week, the principal matters discussed were the means of prevention of the spread of typhoid fever and the extension of the sewer system of the District

MEDICAL EXAMINATIONS OF PHYSICIANS TO THE POOR —The medical examining board of the District Government held its first examination on the 5th inst to fill vacancies in the staff of physicians to the poor Twenty-five applicants were examined Ten vacancies will exist on December 15 next The names of the successful candidates will be announced later

GEORGETOWN MEDICAL COLLEGE —The chair of surgery has been divided Deputy Surgeon-General Forwood, U S A has consented to give a number of lectures upon such portions of military surgery as will prove of decided interest to the general surgeon He will also treat of surgical pathology and the technique of operations Word has just been received from Prof Ernest La Place, in response to an invitation, that he will lecture on brain surgery Dr Snyder, of Garfield Hospital staff, has been elected an additional professor of surgery Dr Snyder will also lecture at the college upon surgery

Dr John W Bayne, attending surgeon to Providence Hospital, will this year lecture on theoretical as well as clinical surgery Dr Devereux has been elected lecturer on "minor surgery," and will continue his efficient instruction in bandaging and fracture dressing, which made last year's course in practical surgery such a success Dr George M Kober, late of the United States Army Medical Corps, has been elected professor of hygiene and military surgery As an acknowledgment of his ability in hygiene the honorable Commissioners of the District have selected him for the important post of special sanitary inspector to study the cause of the recent epidemic of typhoid fever

The faculty has created the chair of diseases of infancy and children To this professorship they have elected Dr S S Adams The didactic course which he will give will be illustrated by bedside instruction at the Children's and Washington Hospital for Foundlings

The facilities for clinical medicine have been augmented by the election of Dr T N Vincent as professor of clinical medicine He will lecture at Providence Hospital The clinical professors will add to their usual clinics at the appointed hours instruction at the bedside by ward classes To these facilities for clinical instruction additional opportunities will be furnished by other members of the medical staffs of Providence and Emergency Hospitals, as well as the Eastern and Women's Dispensary

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S Army, from September 28 1895 to October 4, 1895

Capt Eugene L Swift, Asst Surgeon (Ft Yates, N D), is granted leave of absence for one month, to take effect when his services can be spared with permission to apply for an extension of one month

Lieut Col Joseph R Gibson, Deputy Surgeon General, will report in person to the president of the Army retiring board at Washington Bks , D C , at such time as he may designate, for examination by the board

Capt Guy L Edie, Asst Surgeon, is relieved from duty as assistant to the attending surgeon in the city of Washington

First Lieut Frederick P Reynolds, Asst Surgeon, is relieved from duty at Ft Sam Houston, Texas and ordered to Ft Clark, Texas, for duty, relieving Capt Benjamin L Ten Eyck, Asst Surgeon, Capt Ten Eyck, on being thus relieved, is ordered to Columbus Bks , Ohio, for duty

First Lieut William W Quinton, Asst Surgeon, will be relieved from temporary duty at Ft Logan, Colo , to take effect upon the arrival there of Capt W W Johnson, Asst Surgeon, and ordered to Ft Riley, Kan , for duty

Lieut Col John S Billings, Deputy Surgeon General, having served over thirty years in the Army, is on his own application and by direction of the President, retired from active service this date Oct 1 1895

First Lieut Frank T Meriwether, Asst Surgeon, having been found incapacitated by an Army retiring board on account of disability incident to the service is by direction of the President retired from active service this date

Capt Henry P Birmingham, Asst Surgeon, is granted leave of absence for one month, to take effect upon the arrival at Ft Trumbull, Conn of Capt George E Bushnell, Asst Surgeon

Capt George E Bushnell, Asst Surgeon, will proceed to Ft Trumbull Conn and report for temporary duty during the absence on leave of Capt H P Birmingham, Asst Surgeon

Major Washington Matthews, Surgeon, having been found incapacitated for active service by an Army retiring board, on account of disability incident to the service, is by direction of the President retired from active service this date, Sept 26 1895

Capt Thomas U Raymond Asst Surgeon, is granted leave of absence for four months, to take effect about Nov 5, 1895

PROMOTION

Capt Louis W Crampton, Asst Surgeon, promoted to be Surgeon with the rank of Major Sept 6 1895

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending October 5 1895

Medical Director E S Bogert, detached from duty in charge of naval hospital at New York, November 1, and ordered to attendance on officers of the Navy in that city

Medical Inspector T N Penrose, ordered to duty November 1 in charge of the naval hospital at New York, in addition to his present duties

Surgeon R C Person's recent orders are so far modified that, when detached from the "Minnesota," he is ordered to special duty in connection with the improvements of the naval hospital at New York

Surgeon L G Heneberger, ordered to duty in attendance on naval officers in New York

Marine-Hospital Changes Official list of changes of station and duties of Medical Officers of the U S Marine Hospital Service, for the fifteen days ended September 30 1895

Surgeon C S D Fessenden, granted leave of absence for thirty days, Sept 24, 1895

Surgeon P H Bailhache detailed to represent Service at meeting of American Public Health Association, Sept 24, 1895

Surgeon J M Gassaway granted leave of absence for one day, Sept 21, 1895, and for fifteen days, Sept 28, 1895

Surgeon H R Carter, granted leave of absence for one day, Sept 24, 1895

P A Surgeon S D Brooks, directed to proceed from Chicago, Ill , to St. Louis Mo for temporary duty, Sept 16, 1895

P A Surgeon L L Williams, relieved from temporary duty at South Atlantic Quarantine and directed to rejoin station at Charleston, S C Sept 19, 1895 Granted leave of absence for twelve days Sept 25 1895

P A Surgeon J J Kinyoun detailed to represent Service at meeting of American Public Health Association, Sept 24, 1895

P A Surgeon J B Stoner, granted leave of absence for thirty days, Sept 20, 1895

P A Surgeon M J Rosenau, to proceed from Eagle Pass, Texas, to San Francisco Quarantine Station, for temporary duty Sept 16, 1895

Asst Surgeon L E Cofer granted leave of absence for thirty days, Sept 28 1895

Asst Surgeon J A Nydegger, to proceed from Savannah, Ga to Mobile, Ala for temporary duty, Sept 16, 1895

Asst Surgeon J H Oakley, granted leave of absence for thirty days Sept 30, 1895

LETTERS RECEIVED

Anderson G K , New York, N Y , Allport, F , Minneapolis, Minn , (2), Ayres S C , Cincinnati Ohio, Ashmead, A S , New York, N Y Atkinson W B Philadelphia, Pa., (2)

Bovee, J W Washington, D C , Barrett, J E , Wooster Ohio Bernd, Henry & Co St Louis, Mo , Bell, Clark, New York, N Y, Boody, Geo Independence, Iowa

Carstens, J H , Detroit, Mich , Cox, R P , Rome, Ga Collins, C A New York, N Y

Duncan B S , Columbus, Miss , Davis, B B , Omaha, Neb Doughty, W H , Augusta Ga , Dixson, Z A , Librarian, University of Chicago, Dewey, W F , Petersburg, Va

Eastman, Thos B Indianapolis, Ind

Formaneck, F , Chicago Ill , Ferguson, H W , Chicago Ill

Gallaher, Thos J , Denver, Colo Graf, Will J , Cincinnati Ohio Givens, Jno W , Baltimore Md , Garlington, T R , Rome, Ga , Gunn, Malcolm, Rush Medical College, Chicago Ill

Hagan, Hugh, Atlanta, Ga , Hooper E D , Boston, Mass Haag D E , Toledo, Ohio, Howle, W P , Oran, Mo , Hild, F H , Librarian, Chicago Public Library Harmison, D C , Bath Ill , Hawley D C , Burlington, Vt , Hektoen Ludwig Rush Medical College, Chicago, Ill

Jones, D W , Rising City, Neb Jones, Joseph, New Orleans, La

Kreider Geo N , Springfield, Ill Koenig, Adolph Pittsburg, Pa

Ludwig, Henry C , New York N Y , Loving, Starling, Columbus, Ohio Lea Brothers & Co , Philadelphia Pa , (2)

Mann, E C , New York, N Y Mathis A , Macon Ga Mudd, H H St Louis, Mo Mason L D , Brooklyn N Y Mason, R O , New York N Y Martin Wm , San Francisco, Cal Moore, K P Macon Ga , Montgomery, E E , Philadelphia Pa , MacNeal, Arthur, Berwyn, Ill

Ohlmacher, A P , Chicago, Ill

Parmele, Chas Roome Co , New York, N Y , Pettyjohn, E S , Alma, Mich , Peterson, F New York, N Y

Quimby I N Jersey City, N J

Rogers, L L , Kingston, Pa Richardson, C H , Montezuma Ga , Ruzicka V & Sons Baltimore, Md , von Ruck, Karl Asheville, N C

Spark W T , Rutledge, Ga Simonton A C , San Jose, Cal , Smith, F T , Chattanooga, Tenn Schoch, L E Reading, Pa , Schimmel, M S , Baltimore, Md , Spencer, G A Haverhill, Mass

Thompson W Gilman, New York, N Y

Vance, A J , Harrison, Ark

Wesley, A A Chicago, Ill Warner, W R & Co , Philadelphia, Pa Wing, Elbert, Chicago, Ill , Wise, G E , Librarian, Newberry Library, Chicago, Ill , Wandless, Henry W , Dallas, Texas, Whinery, S , Cincinnati, Ohio

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ADDRESS

STRENGTH OF THE DIFFERENT MYDRIATICS AND MYOTICS

CHAIRMAN'S ADDRESS

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md., May 7-10 1895

BY EDWARD JACKSON A M , M D
PROFESSOR OF DISEASES OF THE EYE IN THE PHILADELPHIA POLYCLINIC
SURGEON TO WILLS EYE HOSPITAL, PHILADELPHIA

It will naturally occur to you that the development of our own Section work, the increase in the number of papers presented here which raise points for our discussion, and the increase in the number of members who can from their own observations add to the value of our discussions, together with the multiplication of ophthalmic journals, has rendered obsolete the Address which the By-laws of the American Medical Association say the Chairman shall prepare "on the recent advancements in the branches belonging to his Section " My predecessors for some years seem to have felt this and have chiefly confined their remarks to the other topic allotted them, viz , "suggestions in regard to improvements in methods of work "

Such suggestions as I would make regarding the conduct of our Section have been embodied in the arrangement of our program, or will appear in the course of our proceedings The most important of them is in the attempt to enforce brevity in the communications that are to be read before us In this effort I ask your assistance—that as readers of papers or speakers in discussion you will not ask for extension of time—and that as members of the Section you will bear in mind the rights of those who have not yet obtained the floor, as against the natural desire of a speaker to communicate more than a fair share of his ideas

For a gathering such as this, the elementary principles, the complete and rounded treatise, the historical review, the miscellaneous details of cases, even the professional experiences of the speaker, except as they bear directly on the point under discussion, are all out of place The office of the written paper here is to awaken and shape the discussion If you have new facts, even of the highest importance, that will awaken no criticism from our experience, suggest no questions that we want to put to you, do not bring them here You can communicate them more cheaply and more perfectly through the printed page The medical society should not be a contrivance for stuffing unwilling victims with even the most valuable information If we have tried to use it for that purpose, let us stop doing so

It may often happen that with the papers that are to be printed, as well as read here, we may desire that as they appear in the Journal, or our volume of Transactions, they should contain matter not essential to the intelligent consideration of the points raised for discussion Such matter may well be included in the paper, but omitted in the reading

The absurdity of addressing you on current ophthalmic literature, with the chief additions to which you are already familiar, is too apparent to demand any apology for turning quite aside from such a course I have chosen, therefore, to speak chiefly on a particular topic, important in itself, but I think especially appropriate, because complete knowledge of it will be best reached through collective investigation

RELATIVE STRENGTH OF MYDRIATICS AND MYOTICS

With the first medical use of any drug there arises the question of dosage, so that views, more or less positive, are current with reference to the absolute and relative strength of our various mydriatics and myotics They are, however, little more than indefinite impressions, such as would not be tolerated among the accumulations of an exact science like chemistry or physics, and it is, I believe, quite within our power to replace them by definite knowledge The mutual antagonism of these two classes of drugs, and the readiness and exactness with which we can measure the diameter of the pupil and the distance of the near point of accommodation, render this the field in which we can first gain exact quantitative knowledge of the physiologic action of drugs In other investigations of the kind, we may know exactly the dose applied and the body weight of the animal to which it is applied, but have commonly, no means of exactly measuring for comparison the result produced In this matter of the dilatation or contraction of the pupil, the increased or diminished effort of the ciliary muscle, cause and effect, factors and product, can both be estimated with exactness

The effect of a mydriatic on the eye can be most accurately observed subjectively, the subject of experiment making the observation, and one eye only should be subjected to the influence of the drug at one time, the other being kept normal for control of illumination and for comparison, the size of the pupil is to be measured by the distance apart of pinhole openings that give tangent circles of diffusion on the retina I have employed a series of pin holes punched in a piece of cardboard, the distance between them varying by ¼ millimeter intervals from 2 mm. to 9 mm The effect on accommodation is tested by placing a lens before the eye subjected to the drug, convex for a mydriatic, concave for a myotic, and covering first one eye, then the other, while they are both made to focus fine print at the near point of distinct vision, and changing the lens used until that strength is found which most accurately neutralizes the influence of the drug on the ciliary muscles Complete absence of accommodative power or pupillary reaction is ascertained by the ordinary methods

In the experiments now referred to, I have used the various drugs dissolved in distilled water, in proportions varying from 1 to 10 (homatropin) to 1 to 2000000 (hyoscyamin, etc) and have applied them by dropping on the cornea with a pipette, giving 180 drops of water to a drachm

As the measure of the strength of a mydriatic we may take the amount required to produce either of several definite physiologic effects Thus we may take the strength of the solution when carefully applied that will constantly produce the least effect that can be certainly recognized This I have found to be for pilocarpin (hydrochlorate), 1 2000, or 1-6000 gr , homatropin (hydrochlorate), 1 10000, or 1-30000 gr , eserin (sulphate), 1 50000, or 1-150000 gr , atropin (sulphate), 1 500000, or 1-15000000 gr , hyoscyamin (hydrochlorate), 1 1000000, or 1-3000000 of a grain

What will be said of the strength of hyoscyamin applies equally to duboisin and scopolamin, and probably to daturin In the Transactions of the Medical Society of the State of Pennsylvania for 1882, p 157, I published a study of the subject, and the conclusion reached through it that, "Daturia, duboisia, and hyoscyamia are physiologically identical" Recently I have carefully compared the actions of duboisin and hyoscyamin with that of the newly introduced scopolamin, and have not been able to discover any difference between them

This relation of the sizes of the minimum dose is a simple one, easily ascertained, and one that each of you may verify or correct without causing yourselves any personal inconvenience It is to be hoped many will test it, as its general study would almost certainly reveal important facts as to susceptibility and idiosyncrasy

But in practice we use these drugs in doses enormously greater, and when so used the ratios of their strengths differ markedly from those above indicated In general it appears that those drugs whose action is more evanescent, require to be used in relatively larger dose to produce the minimum effect, that is, in practical doses they prove relatively stronger This will appear on comparison of the foregoing with the data to be given presently

A more practical measure of strength is to be found in the amount of the drug required to produce full dilatation of the pupil or complete paralysis of the accommodation For purposes of comparison, however, a method which eliminates errors from imperfect instillation and absorption of the drug is to determine the strength of the different mydriatics by observing their power to neutralize a rather strong (1 to 1000, nearly 5 grain to the fluid ounce) solution of eserin sulphate

The trial has been made by using a single solution containing both the drugs in the desired proportions When this is resorted to, the myotic effect is first manifest, and as it declines the mydriatic becomes predominant This is the case to a slight extent even with homatropin, and is much more marked with the slower mydriatics, especially atropin Still, even with atropin, there is a time at the beginning of its maximum effect when the influence of the eserin has scarcely begun to decline, when they can be made to closely neutralize each other

Taking this period of most complete neutralization, which is about one and one-half hours after instillation for homatropin, two and one-half hours for hyoscyamin, and three and one-half hours for atropin, I find that to neutralize the influence of the mydriatics requires for 1 part homatropin, 1-6 part eserin, 1 part atropin, 5 parts of eserin, 1 part hyoscyamin, 12½ parts eserin, 1 part homatropin, 4 parts pilocarpin

Taking homatropin as the unit, the relative strength of the mydriatics and myotics then appears to be pilocarpin (hydrochlorate), ¼, homatropin (hydrochlorate), 1, eserin (sulphate), 6, atropin (sulphate), 30, hyoscyamin (hydrochlorate), 75

These proportions hold pretty nearly for either the effects on the pupil or on the accommodation, although in my own eyes (the only ones in which I have been able to note very accurately the changes in the accommodation), the mydriatics have all shown a relatively greater effect on accommodation That is, in the transition from myosis to mydriasis, there has in each instance been a time when the pupil still remained contracted, although the accommodation had descended below the normal

The strengths of the mydriatics and myotics that I have thus indicated has been ascertained by experiments first on my own eyes Nearly all have been confirmed by experiments on the eyes of other persons, but not any large proportion of them on the eyes of any one person In many respects these observations agree with the recorded observations of others, as with Risley, in his conclusion published in his first account of duboisin, that its influence on the accommodation was more than twice as great as that of atropin, and the chief results obtained by Donders and von Graefe and their students experimenting on atropin and extract of calabar bean

But in some respects the published conclusions of earlier observers have not been confirmed This has been especially the case in regard to minimum doses Thus Loring, for atropin, found the minimum strength that would produce a notable effect on the pupil to be 1 150000, and Jaarsma (quoted by Landolt) concluded that a drop of either of the following solutions was the minimum dose that would affect the pupil pilocarpin, 1 400, eserin, 1 12800; atropin, 1 80000, daturin, 1 160000, duboisin, 1 1200000 He thought that it required a strength of 1 800 of eserin to affect the accommodation Graefe speaks of the dilatation produced by a solution of 1 120000 of atropin "long kept in contact" with the eye of a dog The weakest solution of atropin referred to by Donders in his work was 1 14400, of which he says "On the following day no trace of mydriasis is perceptible" ("Accommodation and Refraction of the Eye," p 588) I have, after the instillation of one-third of a minim of a 1 500000 solution of atropin containing 1-1500000 of a grain of the drug, found a mydriasis amounting to 25 of a mm , greater diameter of the pupil, after twenty-four hours Subsequently, however, Donders became better acquainted with the mydriatic power of atropin, as is shown by the following letter published in the "Life and Letters of Charles Darwin," vol ii, p 498

Down, July 7, 1874

My dear Professor Donders —My son George writes to me that he has seen you and that you have been very kind to him, for which I return to you my cordial thanks He tells me, on your authority, of a fact that interests me in the highest degree, and which I much wish to be allowed to quote It relates to the action of 1-1000000 of a grain of atropin on the eye Now, will you be so kind, whenever you can find a little leisure, as to tell me whether you yourself have observed this fact, or believe it on good authority? I also wish to know what proportion by weight, the atropin bore to the water solution, and how much of the solution was applied to the eye? The reason why I am so anxious on this head is, that it gives some support to certain facts repeatedly observed by me, with respect to the action of phosphate of ammonia on Drosera The 1 4000000 of a grain absorbed by a gland clearly makes the tentacle which bears this gland become inflected , and I am firmly convinced that the 1 20000000 of a grain of crystallized salt (i e , containing about one-third of its weight of water of crystallization) does the same Now I am quite unhappy at the thought of having to publish such a statement It will be of great value *to me to be able to give any analogous facts in support* The case of Drosera is all the more interesting as the absorption of the salt or any other stimulant applied to the gland causes *it to transmit a motor influence to* the base of the tentacle which bears the gland

Pray forgive me for troubling you, and do not trouble yourself to answer this until your health is fully reëstablished Pray believe me, yours very sincerely,

CHARLES DARWIN

The fact here asked for is used in Darwin's "Insectivorous Plants," chap VII It is the dilatation of the pupil of the dog by 1-1000000 grain of atropin applied directly to the iris But I have read this letter, not merely because it supports my observation as to the mydriatic power of atropin, but because in it lies revealed a general fact most worthy of our consideration Does it appear to any of you that here are two great men in their dotage, pleased with mere trifles? You have then but poorly traced the course of scientific progress This letter indicates the importance attached by two of the greatest scientists of our century to exactness and definiteness of observation , and all the history of scientific progress testifies that they were right in their estimate

The observation of the Greek philosopher in his bath tub, of the loss of weight by displacement of water, with a few similar observations furnished a foundation on which physics grew up, centuries before her sister sciences were imagined For a thousand years the alchemists distilled and compounded and theorized, until in the eighteenth century, Black took to carefully weighing the products of his experiments Priestley and Cavendish, Scheele and Lavoisier followed him, and in a single generation the crude theories of alchemy dissipated as mists before the morning sun, revealing the great vistas of modern chemistry Within the year we have witnessed the proclaiming of a new element in our atmosphere, revealed simply by the minute difference between the weight of supposed nitrogen procured from the air, and nitrogen procured from other sources

We all look forward to a day when we can speak with more truth of a science of medicine Let us remember that it will come, and only come, as we bring the balance and the rule, and all other means of minute exactness into our methods of clinical investigation

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ORIGINAL ARTICLES

THE KRAG JORGENSEN RIFLE

A REPORT OF ITS EFFECTS ON THE SKULL OF THE LIVING, SHOWING THE FALLACY OF THE "HUMANE" THEORY ON GUNSHOT WOUNDS FROM THE MODERN RIFLE

BY MAJOR ALFRED C GIRARD, SURGEON U S ARMY
FORT SHERIDAN ILL

The shooting through the head of a military convict attempting to escape from a sentinel at this post, with the Krag-Jorgenson, the new rifle adopted for the United States Army—presenting the first instance *in the country of its effects* on the skull of the living subject, *has led to various sensational accounts in the* secular press Based on these, I have received a number of letters of inquiry from physicians interested in the result of the change of caliber In order to prevent erroneous deductions from newspaper reports, and to give the profession a true description of the *injury produced, I have deemed proper to publish* this account, with a sketch of the skull as it appeared after removal of the integument

I saw the man a few minutes after he was shot His breathing was stertorous , he was, unconscious, and death appeared to be only a question of minutes A cursory examination revealed two bullet wounds The entrance wound (he was running away when shot), was located in the upper occipital region of the skull, and that of exit in the forehead a little to the right of the center (Distance between rifle and victim ninety feet) After passing through the man's skull, the ball went through a tree eight inches in diameter and buried *itself in* the ground two feet The man died in half anhour

Post-mortem was made the same night The wound of entrance into the skin presented a round opening, without the appearance of scorching or blackening The wound of exit in front was larger and more ragged The integument was carefully dissected off and the bone of the top of the skull found extensively fractured, the parts being connected here and there by fascia

On the calvarium being removed, the surface of the dura mater presented a state of intense congestion To the right of the longitudinal fissure it was torn through for a distance of about four inches, about one inch from and parallel to it

On removal of the coverings, the convolutions of the brain were made prominent by the engorged network of superficial veins A furrow, corresponding to the injury of the dura was ploughed through the right hemisphere, in the region of the superior frontal convolution, about half an inch deep The right lateral sinus appeared filled with blood serum , the left was normal On section, the vessels of the brain were found engorged, but no other macroscopic injury of a prominent nature was apparent

After removal of the brain, the cribriform plate exhibited comminuted fracture , one or two slight fissures in the petrous and squamous portion of the temporal bone, otherwise the bone was intact

The skull cap presented the following injuries, viz at the site of the entrance of the bullet, one half inch above and to the right of the junction of the occipital and right parietal bones, an oval perforation 1 x ½ inch, the edges shelving inward From this opening there radiated the following fractures, viz

1 Downward into the left lambdoid suture, separating it, thence horizontally along the parietal and frontal bones to the left orbital cavity

2 An oblique into the sagittal suture, opening it *for two inches*

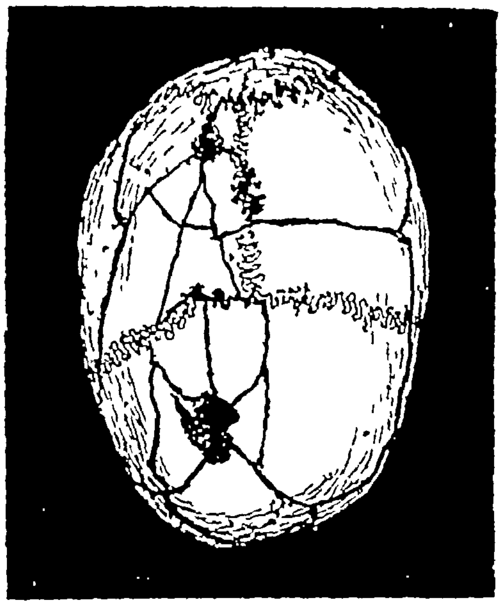
3 One parallel with the sagittal suture, bifurcating one inch from its origin into a wedge-shaped piece, which, again fractured, continued to the coronal suture separating it

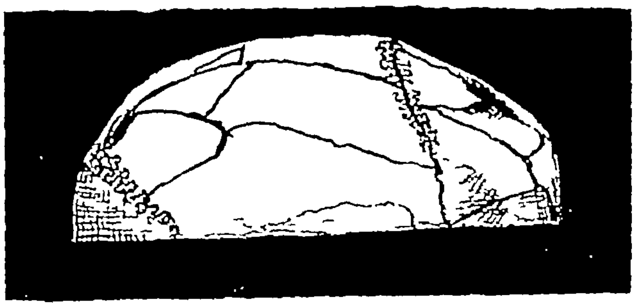
4 The left fracture communicated with the horizontal left fracture, described under 1, parallel to the coronal suture and one and a half inches to the rear

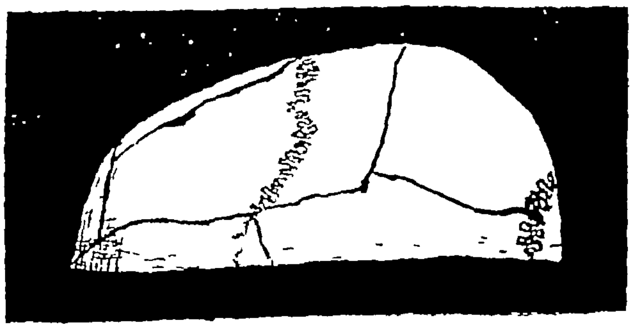
5 A fracture at an acute angle from the former to

the right, communicating with the former, and with the lambdoid, two inches to the right of the superior angle of the occipital bone, and toward the front, extending into the coronal suture

The wound of exit, two inches in front of the coronal suture and one inch to the right of the median line, was pyriform, one and a half inches long at its greatest diameter, three-eighths of an inch wide, the edges more ragged It communicated with the coronal suture by three fractures, with the orbital ridge by two, and thence with the horizontal breaks







A C Girard, del

Death was evidently caused by concussion, as no vital parts of the brain were injured, and the hemorrhage was not considerable

Now as to the effect of the bullet, the so called humane result of this small caliber bullet, not much larger than a pencil, may be disposed ot at once in the negative The bullet was recovered and showed but a slight indentation,—the openings, considering the pulverization of bone in the immediate vicinity of the impact were small We had clearly, what is called an explosive effect

A few words of explanation on the *modus operandi* of such an injury are necessary to lead to a correct understanding Theories, such as the effect of powder gases, heating of the bullet, have generally been abandoned There was no deformation of the bullet or lateral impact, which might increase the striking surface

I would exceed the limits, which have to be given to an article of this nature, if I attempted to give even in a condensed manner the experiments, which have led to the present views on this enormously destructive result accompanying an apparent slight bone defect The conclusions arrived at have to be sufficient, and any one taking a special interest in the matter will find a complete history of the experiments in the *Bibliotheca Medica*, edited by Kocher, Konig and Mikulicz, names which guarantee the correctness and soundness of the accounts given (Part E, 2, 1895)

Modern projectiles act in a twofold manner first in the line of the impact, and second, in a lateral direction In both cases we observe beside the immediate effect, motion, which is communicated from the place of impact If the result of impact leads to perforation, then the lateral effect is lessened in corresponding ratio It depends on the cohesion of the molecules, on the diameter of the projectile, and on its velocity In common terms it may be stated that the greater the cohesion, the more energy is wasted and the lesser the lateral effect—the greater the diameter, the more force is lost in the impact, but the greater the velocity, the more extended the lateral transmission of motion as the molecules have not the time to escape the lateral compression and communicate their motion until a place of minor resistance is reached, when disruption follows This is the so-called explosive effect, which more properly should be called expansive This is illustrated in our case by the penetration of a small bullet at a high velocity The defect at the place of impact is small, but the lateral motion was such that the skull was raised from its base by the horizontal fractures and as this did apparently not suffice to limit the motion, the upper fragments were torn from their fascial connection

In addition to this direct expansive effect on the bone of the skull, there is the hydrostatic result of rapid compression of the semi-fluid brain mass, confined in it The molecules of liquids are readily displaced and a greater effect will be produced in them by a relatively smaller velocity, and with high velocity it is enormous

It must be understood that the small caliber has not *introduced* the explosive effect, but owing to the higher velocity and consequently greater impact with a lesser diameter, it has *extended the zone* of explosive effect, always observed in large caliber projectiles, as long as they are moving under high velocity

We may therefore give the following resumé of this case a direct impact under the highest kind of velocity, without deformation of the bullet, small hole of entrance and exit of the bone, with extended stellate and circumferential fracture of the skull, partly due to direct impact, partly to lateral expansive motion, and partly to the hydrostatic effect of compression of the semi fluid brain by the bullet, with displacement of the molecules in all directions, and disruption at the place of least resistance

The base of the skull was not affected by the hydrostatic pressure because the dome was already weakened by the expansive effect of the direct impact, as shown by the longitudinal fractures and their branches

Since completing the above, it has occurred to me that readers who are not familiar with the later experiments in gunshot injuries, might not readily understand what the "humane" theory is, and I therefore add a few words of explanation

When the first experiments with the small caliber gun were made, it was found that occasionally the epiphysis of a bone showed an almost clean perforation and the rash conclusion was drawn that the new class of weapons, instead of shattering the bones and tearing the flesh, would make almost a punctured wound, therein they would be more humane

The main fallacy in these experiments was that they were made on dry bones, in which the cancellated tissue of the epiphysis readily gave way to the lateral effect and thus the explosive result did not occur In all experiments on fresh bones, and on bony cavities filled with a pulp resembling brain matter, the explosive action was manifest, as it has been found in the practical exhibit of the case under consideration

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INCIPIENT CATARACT

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md, May 7-10 1895

BY ALBERT RUFUS BAKER, M D

PROFESSOR OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF WOOSTER
CLEVELAND OHIO

It is surprising how little real progress has been made in our knowledge of the etiology and pathology of cataract since the investigations of Marriotte,[1] Boerhaave[2] and Brisseau,[3] two hundred years ago

In a paper read before this Section in 1892, I presented some thoughts on infantile cataract[4] What I have to say to day will apply more particularly to the so called senile and other forms of cataract in adults

In a large manufacturing city, like Cleveland, nearly one-half of the opacities of the lens coming under the observation of the ophthalmic surgeon are the result of traumatism, but as a discussion of injuries of the eye would require more than ten minutes, I pass to the consideration of other forms of cataract

That there is a diabetic cataract is now generally recognized That under dietetic and medicinal treatment the opacity of the lenses may disappear is not so generally conceded, although cases have been reported by Seegen,[5] Tannahill,[6] Nettleship[7] and others

In a paper[8] read before the Ohio State Medical Society in 1889, I reported the case of Mrs S, aged 43, first seen in April, 1884, cataract almost mature, could not count fingers with either eye Urine contained large amount of sugar which almost entirely disappeared under dietetic and medicinal treatment Vision rapidly improved to O D, 20-70, O S, 20-60 Continued to see very well with occasional fluctuations in vision according to amount of sugar in urine, until September, 1888, a period of four and one half years, when after exposure she had suppression of urine and died suddenly in coma

Since reporting the above case, Mr M came under my observation Aged 56, having diabetic cataracts in both eyes Left lens extracted in October, 1888 Shortly afterward he went abroad, lived much of the time at Carlsbad, drinking plenty of water and living on restricted diet In February, 1894, he returned to this country improved in health and much to my surprise had discarded the cataract lenses and was using the unoperated eye with presbyopic lens

Notwithstanding the general statement of recent writers to the contrary (Schmidt Rimpler)[9] I believe that further observation will show that there is a nephritic as well as a diabetic cataract Eight out of thirty consecutive cases of cataract, in one hospital in my service, had albumin in the urine, although kidney disease was not suspected by the patients or family physicians Deutschman[10] recognizes this not as a coincidence but says "We must recognize a nephritic cataract just as we recognize a diabetic cataract, the cause in both cases being constitutional" Becker in the *Verhandl d Heidelb Ophth Vers* 1884, denied Deutschman's statement that chronic nephritis leads to cataract

The only case in which I have observed any marked improvement in vision in a nephritic cataract was that of Mr O, aged 62, mature cataract of right eye, immature cataract of left, vision S 20-200, operation of linear extraction performed on right eye in October, 1883, vision after operation 20-30 Urine contained a large amount of albumin and casts There was a slight hypertrophy of the heart, but no valvular disease Dietetic and medicinal treatment for the albuminuria was instituted with quite satisfactory results At the end of a year found that his vision had improved to 20-50, S, in the unoperated eye, and that he had discarded the cataract spectacles and was using his old ones, with which he claimed to see better He continued to use a pair of +2 50 D lenses for five years, when his sight began to fail rapidly in left eye and he returned to the use of the cataract lenses About the same time, there was a decided increase in the amount of albumin in the urine, the old gentleman after suffering from edema of the feet and legs and other serious results of kidney disease, died in 1891

Numerous cases of cataract as the result of ergotism have been reported Rickets is not infrequently said to be a cause of cataract as well as a certain form of skin disease Glass blowers' cataract is recognized, and I have found cataract quite frequent among puddlers and other employes about iron mills who are exposed to intense heat

Fraenkel,[11] of Lyons, "believes that cataracts are due to disorders of nutrition, i e, that they are due to auto-intoxication" Of thirty-four cases he reports, in thirty three the urine contained less than the normal amount of toxic substances

Collins[12] believes that the cataract process is not an exaggerated senile change but due to disturbed nutrition of another nature, in so far as chemic and morphologic changes are concerned

Roosa[13] reports a case of cataract following a stroke of lightning which subsequently almost entirely disappeared

Risley[14] says "That while opacity of the lens is a disease of advanced life, it does not in all probability depend upon senile changes, but is originated in local pathologic states involving the nutrition of the eye itself" These local pathologic changes he believes to be in the choroid, and thinks the changes in the lens and vitreous in later life to be due to the same cause as the impaired nutrition of the sclera and the resulting posterior staphyloma and consequent myopia in children He attributes the comparative freedom from cataract in early life to the yielding of the sclera, which prevents the lens from suffering from injurious disturbances of nutrition In support of this theory of the cause of cataract Dr Risley presents statistics of sixty cases taken consecutively from his case book, in forty of which there was a choroiditis noted, and in many of the other twenty the opacity of the lens was so far advanced as to prevent a study of the fundus oculi

I can recall five or six cases in which a preliminary iridectomy has been performed, and the patients have waited from one to fifteen years for the cataract to become ripe, at the present time they are no nearer maturity, and in two or three cases the lens is clearer than at the time of the iridectomy

Thomas[15] and White[16] each report a case in which after triturating the lens to hasten maturity, the opacity disappeared entirely

Witvalsky[18] has collected eighteen cases of spontaneous cure of senile cataract by absorption, reported within the past eight years, to which he adds two of his own and concludes that such cases are much more common than is generally supposed

High degree of myopia has long been recognized as a predisposing cause of cataract—the same is true of glaucoma, the one can often be prevented by spectacles and the other cured by operation While it is true that these are exceptional cases that we all recognize and act upon, is it not true that more of the cases of cataract if recognized earlier and studied carefully might be retarded or even cured? So many "cures" for cataract have been proposed by ignorant and unprincipled practitioners that any one proposing to treat incipient cataract is generally looked upon either as a fool or a knave Consequently we have generally been contented to give the advice "Wait until the cataract becomes ripe," and have not given these cases that honest study and close observation that we have many other diseases

I do not believe that clinical observation will confirm Priestly Smith's[17] conclusions in all cases, "that senile cataract is entirely a local process and is not dependent on any disordered state of the general health"

In view of the preceding observations, may we not say that occasionally incipient cataracts under medical, hygienic, dietetic or local treatment do remain stationary or even entirely disappear and that the resources of our art looking toward this end have not been entirely exhausted?

In conclusion, I wish to suggest that in all cases of incipient cataract 1, the urine should be examined chemically and microscopically, 2, the general health should be carefully interrogated, 3, all errors of refraction should be corrected, 4, a careful examination of the fundus oculi should be made, 5, that the patient receive such general and local treatment as may be suggested by the above inquiries, 6, that a few carefully reported histories of cases from incipiency to maturity would be of more value than statistics of hundreds of successful operations, 7, that if operative interference becomes necessary it should be instituted at the earliest possible moment before the general health becomes impaired, preferably by Knapp's[10] method of peripheral capsulotomy, with an iridectomy either at the time of the operation or some time previously

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THE OPERATIVE TREATMENT OF IMMATURE AND SOME FORMS OF ZONULAR CATARACT

Read in the Section on Ophthalmology, at the Forty sixth Annual Meeting of the American Medical Association, held at Baltimore Md May 7 10, 1895

BY JOHN E WEEKS, M D

SURGEON NEW YORK EYE AND EAR INFIRMARY, PROFESSOR OF OPHTHALMOLOGY AND OTOLOGY, WOMAN'S MEDICAL COLLEGE OF THE NEW YORK INFIRMARY
NEW YORK

In the formation of ordinary senile cataract, the shrinkage of the nuclear portion of the lens, as has been pointed out by Becker, plays an important part The shrinkage of the peripheral lamellæ does not progress as rapidly as those of the nuclear portion, and, as a result, a process of cleavage between peripheral and nuclear lamellæ is set up The spaces thus formed are occupied by an emulsion known as the liquor Morgagni, which is composed of granular detritus, fat globules, myeline masses, and the intraocular fluids, and serves to produce the whitish opacities observed The peripheral fibers themselves usually undergo degenerative changes—become filled with minute fat globules, break up into myeline masses and are sometimes entirely disintegrated. The liquor Morgagni forms between the capsule and the lens fibers, as well as between the lamellæ, serving to render the attachment between the two less intimate At the earlier moment of this occurrence, the cataract is at the best stage for removal, however, this process is not gone through with in many cases of nuclear cataract

In the rapidly developing cataract, particularly in relatively young individuals, the lens fibers become swollen by the imbibition of fluids and the granular degeneration of the fibers progresses very rapidly. The white soft cataract is the extreme example of this process In these cases a stage of swelling is marked and the anterior chamber is rendered quite shallow When the lens fibers are swollen, although they may be quite opaque, they are not readily detached from the capsule The stage of shrinkage which follows, after it has proceeded sufficiently to permit of the presence of an anterior chamber of moderate depth, is more favorable for complete removal of the cortical portion, as some liquor Morgagni has been formed between capsule and lens In many cases of cataract, where the process of cleavage plays a decided rôle, the stage of swelling does not develop The nuclear lamellæ remain transparent, often are amber-hued, or show very little change, and the peripheral fibers degenerate very slowly In still another form, occurring in older individuals, the opacity begins in the central portion of the lens, in the form of a diffuse haziness and advances slowly toward the periphery In this form a stage of swelling seldom occurs, the lens being always smaller than the non-cataractous lens of the same age In still another form the lens takes on a deep amber hue, all the fibers are hardened and condensed and there is marked haziness of the nuclear portion In the last class of cases no liquor Morgagni forms, however, the sclerosed lens is quite easily detachable from the capsule In the forms of rapid development the vision is much reduced at an early stage In some cases in which the cleavage affects the equatorial portion or the posterior cortex of the lens, vision becomes reduced, but often remains fairly good for a number of years In many cases of nuclear opacification and in the typical sclerosed lens, the vision may become reduced to 20–100 or less and remain at that point for a long period of time In the class of cases last mentioned, the patient reads with difficulty, if he reads at all, and the degree of vision is not sufficient to permit him to perform the ordinary duties of life

There are also cases of lamellar cataract in which the opaque zone is large and dense, in some, calcareous deposits have taken place In the process of the development of all forms of cataract there is a stage between the loss of useful vision and the formation of a condition which renders the detachment of the lens fibers from the capsule most easy, which may extend over a few months or a few years This stage is most distressing to the individual and in not a few instances entails hardships on the patient or the patient's family

During a long experience in the removal of the non-cataractous lens, at the dead house, conducted for self-instruction, as well as for the instruction of students in the operative surgery of the eye, the writer has studied the behavior of the cortex of the transparent lens It was observed that in the lenses that were twenty-five or thirty years old, the nuclear portion was fairly firm, about two thirds of the mass of the lens coming away with the nucleus It was further observed that much of the detached cortex could be made to follow the nuclear portion The firm nuclear portion became larger as the age of the lens increased On the strength of these observations, in spite of the dictum "hands off" in reference to operations on immature cataract, the writer began to remove the cataractous lens, soon after it had reached a degree of opaqueness sufficient to interfere with useful vision, whatever the form of the cataract might be Before this plan was followed, the operation of ripening, advocated by Forster was tried in a number of cases, two of which are given in the following table The lenses became rapidly opaque, but it was found that removal six weeks or two years later, was complicated by adhesion of cortical substance to the capsule, to probably the same extent as would have occurred had the extraction been performed at the time of the Förster operation This experience was sufficient to cause the writer to abandon all ripening operations as not of sufficient value to compensate for the extra liability to accident and to inflammatory changes consequent on them The writer now extracts at once when the opacity, whether posterior, cortical, nuclear, or peripheral or of any other form, interferes sufficiently with vision to render it of little value to the individual If the lens is much swollen, the operation is postponed, and if the individual can wait until shrinkage occurs, without great sacrifice If he can not, extraction is performed

The form of operation attempted in all uncomplicated cases is—simple extraction, making the incision in the limbus and including about two fifths of the circumference of the cornea, in individuals of 45 years or upward; and a little less in younger individuals The incision is made large enough to permit of the easy extrusion of the firm nuclear portion of the lens As much of the cortical substance as possible is removed by stroking upward over the cornea with spoon or lids, or by means of Critchet's or de Wecker's spoon passed into the anterior chamber Lavage is seldom practiced If, during the operation, any indication for the performance of iridectomy arises, iridectomy is performed It has been found that in the large majority of the cases, iridectomy may be avoided

Does the cortical substance that may remain in the eye after the extraction of immature cataract give rise to inflammatory trouble? The writer has never seen it Substances capable of producing irritation, such as tabular crystals of cholesterin or minute deposits of lime, do not exist in the cortex of the immature cataractous lens, but do appear in greater or less quantities in the cortex of the hyper-mature cataract and their escape from the lens capsule is not infrequently accompanied or followed by irritation to the eye, of greater or less severity The cortex of the immature cataract absorbs slowly if it lies in a capsule which has been opened near its periphery and in which the opening is small If the capsule has been opened freely, which I endeavor to do, absorption of the cortical substance advances rapidly

The accompanying table gives the results of operation in twenty five cases in which an immature condition of the lens was present

The twenty-five cases reported were divided as follows

Immature soft cataract, three cases Two occurred in the same individual and were due to extreme prostration from sea-sickness, during an ocean voyage Forster's operation was performed before the extractions were attempted At the time of the extractions, which followed three weeks after the Forster operation in one case and two years after in the second case, the cortical substance was still quite adherent to the capsule in both Vision of 20–70 was eventually obtained in each eye The third occurred after gummatous iritis, during the process of which a broad posterior synechia formed, only part of the lens was opaque About one-half of the lens substance remained in the capsule In three months the cortex was entirely absorbed and vision of 20–20 + was obtained

Zonular cataract, five cases The ages of the patients were, 19 years, two, 20 years, one, 49 years, two In two of the cases the nucleus was dense In two cases, chalky deposits were present in the opaque zone Mild iritis developed in one of the latter cases In all cases some cortical lens matter remained in the capsule after the first operation The immediate vision was 20–40, two, 20–100, one, 18–100, one, 1–8, one The ultimate vision was 20–20 +, two, 20–30, one, 20–40, one All were simple extractions except one

Immature complicated cataract, four cases Two cases occurred as a result of heredito specific kerato-iritis and were of the diffuse variety, these were removed by the combined method (with iridectomy) The lenses which were mummified came away entire Ultimate vision 20–70 in each eye This could not be improved because of numerous macular opacities of the cornea One case was complicated by adherent leucoma due to corneal ulcer, occurring in the lower third of the cornea Iridectomy—vision of

No	Sex	Age	Health	Cataract	Functional Ex	Date	Operation	Recovery	Time	Immediate V	Secondary Operation	Ultimate V	Remarks
1	F	35	Feeble	Immature soft	Good	Sept 28, '85	Iridectomy cocain small incision peripheral capsulotomy some lens cortex left in capsule	Uneventful	12	20-100	Oct 15, '85	20-70	Förster's operation August 3, 1885
2	F	35	Feeble	Immature soft	Good	Aug 20 '87	Iridectomy some lens cortex left in capsule	Uneventful	14		Sept 10, '87	20-70	Forster's operation, July 20, 1887
Zonular													
3	M	19	Good	Zonular O S	Good	June 15 '93	Cocain 10 per cent simple some cortex remaining	*June 17, anterior chamber restored uneventful*	*14*	*20-40*	*July 25 '93, 6 days*	*20-20+*	Nucleus dense
4	M	19	Good	Zonular O D	Good	June 22 '93	Cocain 4 per cent simple some cortex remaining	Uneventful	16	20-40	July 25 '93 two needles were employed	20-20+	Nucleus dense
5	M	40	Good	Zonular O S	Good	July 28 '93	Cocain 4 per cent simple some cortex remaining	Uneventful	12	20-100	Sept '94 cortical absorbed	20-30	Calcareous deposits in nucleus
6	F	20	Good	Zonular O D	Good	June 19 '94	Cocain 10 per cent *Iridectomy*	Uneventful cortical occluded pupil	18	⅛	July 17, '94	20-40	
7	M	40	Good	Zonular O D Degenerated	Good	March 5 '95	Cocain 4 per cent simple some lens cortex left	Uneventful until the sixth day, when a low form of iritis occurred	19	18-200	Aug 7 cortex absorbed	20-50	Calcareous deposits in nucleus Their escape undoubtedly produced the iritis
Immature complicated													
8	M	17	Good	Diffuse O S after specific kerato iritis	Good	Oct 22 '9	Ether large iridectomy, pupillary membrane removed with capsule forceps and excised, mummified lens removed entire lost a few drops of vitreous	Uneventful	14	12-200	Nov 26 sealed with cautery	20-70	Cornea large with numerous maculæ
9	M	17	Good	Diffuse O D as in No 8	Good	*Jan 7 '93*	*Cocain 10 per cent* large iridectomy mummified lens removed entire pupillary membrane removed	*Uneventful*	*15*	*15-200*	*Feb 11* wound sealed with cautery	*20-70*	*Dense pupillary* membrane
10	M	75	*Good*	O S Immature V =18 200	Good	March 20 '93	Cocain 10 per cent Iridectomy	Uneventful	12	20-70		20-70	Adherent leucoma in lower third of cornea, after corneal ulcer
11	M	38	Good	Immature traumatic *O D*	Good	June 5 '94	Cocain 10 per cent simple, some lens substance remained	Uneventful, considerable soft lens matter in pupil	11	⅛	Refused	20-40	Lens cortex absorbed
12	F	71	Good	Post cortical *Cat* V =20 200 O S	Good	*May 17 '93*	Simple, cocain 10 per *cent* a little cortex left in capsule	Uneventful	12	20-80	June 8, cortex *had become* absorbed	20-20	
13	M	54	Good	Immature Senile, V =20 100 O D Ant cham ⅔ normal	Good	March 13 '94	Cocain 10 per cent simple, very little capsule remaining	Uneventful	*14*	20-20	Apr *23*, cortex had become absorbed.	20-20+	*Patient had been* out of employment one year and was advised to wait another year because of clear cortex
14	M	54	Good	Immature Senile O S V =20 100	Good	March 20, '94	Cocain 10 per cent simple very little cortex remained	Uneventful	14	20-20	Apr 23, cortex absorbed	20-20+	Nuclear cataracts
15	M	31	Good	O S Soft, *traumatic* partly opaque, Ant cham ⅔ normal	Good	May *1, '94*	Cocain 10 per cent *simple*, incision ½ cornea about half of the lens substance remained	Uneventful	12	4-200	July 30 cortex almost entirely absorbed	20-20+	Cataract due to gummatous iritis
16	M	64	Good	Traumatic Senile, Ant cham very shallow	Good	May 15 '94	Cocain 10 per cent simple, incision very small, enlarged with scissors	Uneventful	20	20-50	No decision	Nov 6, '94 20-20	V =20-20 April 6, '95
17	M	57	Good	Immature Diabetic	Good	May 15, '94	Cocain 10 per cent simple very little cortex *remained in the* capsule	Uneventful	11	20-50	June 26	20-20+	
18	M	50	Good	Immature Senile	Good V =10-200	April 25, '94	Cocain 10 per cent simple some cortex remained	*Uneventful*	*9*	*20-50*	May 10	20-20	
19	M	67	Good	Immature Senile	Good V =10 200	July 8, '94	Cocain 10 per cent simple some cortex remained	Uneventful	12	20-50	Aug 8, '94	20-30	
20	M	43	*Good*	*Immature* Senile	Good	Aug 30, '94	Cocain 10 per cent simple	August 31, prolapse of iris, excised	12	20-50		20-50	Lost trace of patient after the primary operation
21	M	69	Good	Immature Senile	Good	Oct 30, '94	Cocain 10 per cent simple, some cortex *remained in capsule*	Uneventful	12	20-40	Nov 20, '94 lens cortex absorbed	20-20+	
22	M	67	Good	Immature Senile	Good V = 15 200	March 5, '95	Cocain 10 per cent simple some lens cortex remained	Uneventful	13	16-200		20-40	
23	M	51	Alcoholic	Immature Senile	Good V = 12 200	March *11, '95*	Cocain 4 per cent *simple, some lens cortex remained*	Uneventful	12	20-40	Apr 9, '95	20-15	Lens cortex completely absorbed
24	M	42	Good	Immature Senile Nuclear	Good V = 18 200	March 19 '95	Cocain 4 per cent simple, some lens cortex remained	Uneventful	17	20-40	Apr 23, '95	20-20+	Lens cortex absorbed
25	M	42	Good	Immature Senile, Nuclear	Good 20 100	March 26, '95	*Cocain 4 per cent* simple	Uneventful	17	20-50	Apr 27 '95	20-20+	

20–70 was obtained One case was that of an immature traumatic cataract following a blow on the eye A simple extraction was performed Vision of 20–40 was obtained Posterior cortical cataract, one case Simple extraction was performed But very little difficulty was experienced in freeing the eye of the greater portion of the cortical substance Vision of 20–20 was obtained

Immature diabetic cataract, one case The extraction, after the simple method, was not accompanied with difficulties Vision of 20–20 + was obtained

There were twelve cases of ordinary senile cataract, four of which were of the diffuse nuclear variety which develops very slowly Simple extraction was performed in all and was not accompanied with unusual difficulty Some cortical substance remained in almost all cases, but was absorbed almost if not entirely in a few weeks, giving no trouble *No* iritis occurred in these cases Prolapse occurred in one case only and was probably due to traumatism The healing in these cases was uneventful and the vision eventually obtained was extremely satisfactory The immediate vision was 20–20— two, 20–30, one, 20–40, three, 20–50, six, 16–200, one, 4–200, one

The ultimate vision after discission in twelve cases 20–15, one, 20–20+, six, 20–20, two, 20–30, one, 20–40, one, 20–50, two

In the twenty five cases there were no losses Iridectomy was done in six cases Simple extraction in nineteen cases One prolapse occurred Discission was done in twenty cases

The ultimate visual results were as follows 20–20 or better, thirteen, 20–30, two, 20–40, three, 20–50, two, 20–70, five The youngest patient operated upon was 17 years, the oldest, 75 years The mean, 45¼ years In all cases the remaining cortex absorbed almost, if not entirely, either before or after discission was performed

The results appear to the writer to be as favorable as those obtained by the removal of cataract ordinarily, at the stage of maturity, and the relief to the patient was in many cases very great, saving them one, two, or even more years of idle waiting

The difficulty of removing immature cataract is greater than that of removing mature cataract and should be done by expert operators In the hands of expert operators the danger is little more than where the lens is ripe

154 Madison Avenue

DISCUSSION ON PAPERS OF DRS BAKER AND WEEKS

Dr George E Frothingham, Detroit Mich —In regard to the paper of Dr Baker I will say that I agree in the main with the views of the author While I *think it* is the experience of most of us that any considerable opacity of the lens never fully clears up, slight opacities may nearly disappear, and we find commencing cataract at times due to change of nutrition of the lens, dependent upon disease *of the* choroid or some constitutional disease, that may be relieved and with the effect to retard or arrest the development of the cataract I remember one case in my *practice in which the* development of a cataract evidently due to choroiditis has apparently been arrested, at any rate it has made no progress for about *seven years* With the conclusions in Dr Baker's paper, I fully agree They are in accordance with the general principles that in incipient cataract we should make a careful and thorough examination *of* the eye and of the general condition of the patient and remedy any pathologic conditions so far as we can

In regard to the paper of Dr Weeks, it deals with a *most* important subject Fortunately we are not often called upon to hasten the maturity of the *cataract* In some cases however, where both eyes are about equally affected and advance very slowly and the condition of the *patient* will not allow of waiting for the natural process of *ripening*, we are forced to decide between extracting an immature cataract or attempting to hasten the maturity by some operation Of the various operations that have been devised I think that Förster's is the best and safest Although it will *sometimes* fail to hasten the progress of development it *is attended* with very little danger It will lead to iritis in a certain per cent of cases but the worst result I *have ever* seen was a slight synechia The pupil should be kept well dilated after the operation until all danger has past If the operation fails to hasten maturity it will allow of the extraction of the immature cataract with the greatest possible degree of safety If I were the most ardent advocate of simple extraction, I would make an exception in the case *of* immature cataract I make in all cases a preliminary iridectomy, and after all irritation has completely subsided and the eye has perfectly recovered from the effect of the operation, if it has failed to produce ripening of the cataract, I then extract the immature cataract, making a peripheral incision in the capsule as a still further safeguard against dangerous reaction from any lens matter that may remain in the eye

Dr Herman Knapp, New York—As to heat producing cataract, I know of one case where I produced a cataract by the galvano cautery point with which I burned off the apex of a keratoconus too cautiously, i e, too slowly pierced the cornea I *wanted to make only* a very *small puncture in the cornea* I obtained this end, but a slowly developing yellowish cataract was the result and had to be extracted Whether outward heat for instance, in fireworkers, is a *notable factor in* the development of cataract, I am not prepared to say About thirty years ago, I saw a lens of a diabetic patient rather quickly become *opaque and soon after* clear up The observation though not fully accurate has remained vivid in my mind, and ever since that time I have watched the progress or regress of cataract, but the above example has remained the only one, and therefore has no appreciable value *Unripe cataracts not infrequently* place us in the alternative of removing a cataract prior to the time when the patient's chances of a good recovery are greatest, or to let a patient wait an indefinite length of time for that most favorable period The vogue into which the ripening operations have come is thus easily accounted for They would be a godsend if their action were certain and free *from danger* Unfortunately many an operation for ripening has been done without producing any effect, on the other hand, these operations have proved injurious by provoking iritis and its consequences, and some by a degree of deleterious *morbid process (plastic and purulent irido* cyclitis and panopthalmitis) Even if these mild or severe reactions occur only exceptionally, we are mortified to have created by our own hands any conditions that dim by complications the chances of the patient, when the chief operation, the extraction, has to be undertaken I, for my part, thus prefer the risk of dealing with remnants by a secondary discis*sion, to* the double operation of ripening and extracting the lens which in a majority of cases requires a subsequent division also to clear the pupil

Dr Joseph A White, Richmond, Va —In regard to Dr Baker's paper on the *etiology of cataract, I am satisfied* that the explanation of Dr Risley, attributing the opacification of the lens to disturbance of its nutrition by pathologic processes in the uvea, especially the choroid, is correct in a large number of cases, while not generally applicable All of you, as well as I, have examined many cases *of* cataract after extraction where there was no choroidal disease nor any other evidence of a pathologic process inside the eye, and consequently I am satisfied that there are many cases of cataract in which the etiology is to us an undiscovered factor, and that much yet remains to be found out in regard to this subject Why in one person an opacification *of the* lens remains stationary and in another is progressive, is also a question *yet to be solved* That this is true we well know *for in* zonular cataract we have it progressive in one, and stationary in another case Why can not therefore, opacification of the lens remain stationary in adults? I know *of* a case of a young man who received a blow in the eye several years ago, *which* by *contra coup* without wound of the cornea, ruptured the iris at its pupillary edge and also the capsule of the lens in direct line with the iritic wound A small opacity of the lens developed at this point and to this day remains stationary Cataract has not followed nor has the *opacity* disappeared As to the disappearance of lenticular opacities I have had very little experience, my *only* case being the one referred to by Dr Baker This case was one with marked anterior central opacity of the lens sufficient to materially decrease vision, and cause a semi blindness with a contracted pupil He wished to have the cataract removed and submitted to the ripening process of paracentesis and external massage with great hopes of having a ripe cataract *in a few weeks* His next visit showed a decided diminution in the size of the opacity I triturated the eye again Result three weeks later, a perfectly clear lens Now either this opacity of the lens disappeared or *I made* a mistake, but every precaution against an error had been taken The pupil was gray when it was contracted and there was no ophthalmoscopic reflex with dilated pupil, the *fundus* was illuminated around the opacity and the vitreous was clear The *opacity moved* up and down, with the eye locating it either in the anterior part of the lens or the cor*nea* and it certainly was not in the latter, hence I concluded that it was a case of partial opacification of the lens that had cleared up, how or why, I don't know, what the massage had to do with the result I am unable *to say Like* other sclerosing processes, and I suppose we may so consider cataract, *it may* come to a standstill or it may even retrograde toward recovery, although such cases are rare To discuss Dr Weeks' paper would take more time than is allowed me I have already, however, gone on record to some extent in regard to immature cataract I presented to this body a paper on that subject several years ago in which I suggested the adoption of a simple process of ripening immature cataracts by paracentesis and external massage without iridectomy, because I had had bad results in Förster's operation from iritic processes I reported a number of cases then and have done others since, and have had exceptionally good results—no bad ones I have been lucky, I suppose Like Dr Knapp, I think the less traumatism an eye is subjected to the better, and hence I never ripen an immature cataract if the case will wait for nature's processes, and then only if the patient is under 60 years of age, because I thereby break up and loosen the cortex from the capsule, simplifying the extraction Over 60 years of age, I extract without waiting for maturity, but it is difficult to say what the latter signifies, as it does not mean the same to each one of us For instance, a patient may be too blind to move about with assistance, and the cataract be still immature, and again sight enough to see large letters may be present, and the cataract be perfectly ripe, This especially applies to those amber tinted cataracts in old people which never become perfectly opaque and hence relatively are immature, while in reality they are perfectly ready for extraction

Dr J L Thompson, Indianapolis—I wish to say that I have seen a well-marked unmistakable case of cataract disappear spontaneously I had every opportunity of watching it for years before and several years also after the clearing up of the lens As I have published the case with all of its complications, I shall only add that this case of spontaneous cure of a cataract by liquid degeneration within the capsule was more clear to me than is the well known fact that this world of ours revolves upon its axis

Dr James A Lydston, Chicago—A few points bearing on the subject matter as presented in the paper, suggested themselves as the paper was read and discussed I believe that we go a little too far in assuming in all cases in which lenticular opacities disappear, that we have a true cataractous formation, for we know that cataract exhibits a process peculiar alone to itself during the formation stage and, indeed, one that is quite characteristic Becker has done more to enhance our knowledge with respect to cataract than any other investigator in this line, and he has shown that primarily cataract develops by the formation of vacuoles as little air chambers distributed through the lens structure and that these subsequently become filled with fluid of a different density from the remaining lens substance, and finally, there is a separation of the nuclear and cortical portions of the lens from the lenticular capsule constituting light cataract Now in many instances in which lenticular opacities disappear spontaneously, it seems that we are not confronted by a true cataractous formation Still we have opacities occurring in cases in which the capsule has been punctured and subsequently closes Here we may have spontaneous disappearance But I seriously doubt the propriety of accepting the statement that any form of diabetic cataract ever spontaneously disappears, as we know such changes only assert themselves in the later stages of diabetes when our case is almost beyond redemption We have cataract arising from large doses of naphthalin or ergot and those arising from concussion, etc, and it seems that possibly these are the types of cataract, erroneously so called, which are capable of spontaneously disappearing and which are all grouped under the heading of incipient cataract

Dr F C Hotz, Chicago—My experience with the ripening processes of immature cataracts has not been satisfactory In some cases no change in the lens was produced, in a number of cases the manipulation was followed by more or less decided cyclitic irritation I have many years since given up all attempts at ripening, and have not felt induced to return to the attempt even by the favorable report Dr White gave of his cases at the Detroit meeting As to the extraction of immature cataract, I find the operation does not involve greater danger than the removal of a fully mature cataract, provided there is not a very large amount of absolutely transparent lens matter But where this is the case the patient's vision is usually still so good that there exists no urgency for an operation In the slowly progressing opacification which starts in the cortex and therefore early causes great disturbance of sight the lens seldom, if ever, becomes absolutely opaque It appears quite opaque at focal illumination but proves transparent for the ophthalmoscope so that the fundus can be seen although through a mist In this form of cataract the whole lens is a piece of yellowish jelly and it comes out *in toto*, leaves a clear pupil and the healing is as smooth as after the extraction of a ripe cataract

Dr S D Risley, Philadelphia—Dr Baker has very courteously noticed my published observations regarding the etiology and treatment of incipient cataract I rise to call attention to a single point in which he has failed to interpret quite correctly some ambiguous sentence in my paper on the subject While in the eighty cases of incipient cataract there reported, it seemed the treatment addressed to the choroidal disease had arrested the progress of the opacification of the lens I think it is stated there that in no case had I witnessed the disappearance of opacities already formed

Dr A J Erwin, Mansfield, Ohio—At the Detroit meeting in 1892, I read a paper on this subject, in which I brought forward ten cases that I had treated in periods of from four to ten years previous to that time, in which there had been no increase of the opacity from the time treatment was begun Since then, one-half of those cases have died, and none of them required an operation of any kind for cataract during life Four are living and under my observation, one has disappeared In these four cases no increase of opacity has occurred as yet In one-half of the cases there was at least one opaque lens—mature cataract I think that some of them belong to that class of cases that never will mature There was not much improvement although some amount of vision in nearly every case, but there appeared to be a complete stopping of the advancement of the opacity My treatment as I gave it on that occasion was iron tonics, with cleansing and iodin applications about the eye I have made up my mind since that the application of weak solutions of iodin applied daily in some cases is the most important part of the treatment, and that the best solution is that of about one half the strength of the officinal tincture

Dr Dudley S Reynolds, Louisville, Ky—It is unfortunate that gentlemen who speak of stationary opacities of the lens fail to state more definitely the character and precise location of those areas of opacity We are all familiar with the peripheral opacities of the lens observed in childhood and remaining nearly stationary through life to advanced age Traumatic opacities of the lens often remain distinctly circumscribed for years I have in mind the case of a student who has a foreign body encysted in the upper portion of the lens, midway between the periphery and the vertex, and which has remained more than four years without any disposition to increased opacity beyond the small area of the wounded portion

Dr J E Weeks, New York—I am glad to hear the expressions given against the artificial methods of ripening cataracts I think it will not be long before such methods will be entirely abandoned

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PRACTICAL POINTS IN ANESTHESIA FOR PLASTIC OPERATIONS ABOUT THE EYE

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association at Baltimore, Md, May 7-10, 1895

BY M W ZIMMERMAN, M D
PHILADELPHIA, PA

A perfect anesthetic would render the patient completely insensible to pain, without in the slightest degree endangering his life Unfortunately this has not been discovered, and we must select that which best meets the requirements of the particular operation to be performed I shall avoid entirely discussing the broad subject of anesthesia with its relations to surgery in general, and confine myself to some of the practical problems presented by operations about the eye

Those plastic operations which come within the scope of the ophthalmic surgeon involve tissues controlled by the very mobile facial muscles, and it is desirable to avoid the disturbance of relation which would result from their activity

Again, operations of this class, for cosmetic reasons, and because they usually have for their object the preservation of the eye, require great care in the selection and adjustment of flaps, and consume much time As a consequence of these facts, they demand complete and prolonged insensibility, with the least possible danger to life The value of unconsciousness in operations about the eye must not be forgotten, it prevents mental suffering and possible interference on the part of the patient

Beginning with the general anesthetics by inhalation, we have in nitrous oxid gas, an agent which meets two of our conditions perfectly, but by reason of the very transient character of its effect, is only suitable for the most trivial operations The contest between chloroform and ether for acceptance as the general surgical anesthetic, is still in progress with slight hope of an early final decision, but we will be safe in assuming that ether is distinctly safer for prolonged administration The marked early irritation of the fauces, and greater tendency to produce nausea, do not weigh against the decreased risk Bromid of ethyl has had a revival recently, it possesses most of the good and all the bad qualities of chloroform, death has certainly resulted from its use

As the imposed conditions of complete and prolonged anesthesia, with the minimum of danger, seem to be best fulfilled by ether, it will be proper to discuss briefly its administration where this bears upon our subject In all details of surgery, the personal equation is large and the particular kind of tool is of minor importance There are, however, practical points which should be considered The region involved, especially when dealing with the lower lid and cheek, is so near the respiratory openings that large or complicated inhalers are to be avoided My own experience while house surgeon at Wills Eye Hospital, led me to depend entirely upon two layers of a coarse, soft towel, which can be very readily molded about the mouth and nose without encroaching upon the field of operation The moistened center of the towel directly over the nostrils and mouth should, for mechanical reasons, be kept from actual contact with these openings This simple method has the great additional advantage of surgical cleanliness, as fresh towels can be substituted whenever vomiting or the regurgitation of mucus make it desirable I am quite sure that many operative wounds have been infected by inhalers, which owing to their size and rigidity, could not be kept from contact

Of the available methods for producing insensibility, limited to the locality of operation, the simplest is that of freezing by the direct contact of salted ice, which has a limited field of usefulness in preventing the pain from applications of the cautery, and like rapid measures It is, however, unfit for prolonged plastic work The various freezing methods by spraying volatile liquids, as ether, ethyl, chlorid and rhigolene, are distinctly more readily adopted to varying conditions of contour and extent of surface, but have the same limitations The peculiar difficulty in protecting the eyeball from irritation, and the brief duration of the effect are the main objections Even when used with the greatest care, the intense cold produced by these sprays sometimes does notable damage to the skin, and the nutrition of future flaps must always be more or less endangered

Concerning the induction of local anesthesia by forcible infiltration of the tissues with benign solutions, little need be said The method is ingenious and an addition to our resources in cases where for any reason both cocain and general anesthesia are impossible It presents most of the objections applying to the subcutaneous use of cocain, while the fact that insensibility is limited to the actually edematous tissue, render it useless for the class of operations being considered

Cocain remains at the present day the one local anesthetic agent which has stood practical tests Other substances undoubtedly possess the power of more or less completely abolishing the sense of pain in tissues to which they are applied, but for various reasons they are of purely theoretical interest Tropococain, a very closely allied drug, has excited some interest, but the slight advantages claimed for it are not established For plastic operations wholly within the conjunctiva, pain may be entirely abolished by using locally a 3 to 5 per cent aqueous solution of cocain muriate, the ready penetration of the solution into the sub conjunctival tissues rendering injections into the latter unnecessary Gelatin disks and oily solutions are unsuitable Where the skin is invaded to a limited extent only, and the operation is of a kind to permit rapid completion, as in canthotomy, this simple method will suffice The well-known effect of the prolonged action of cocain upon the corneal epithelium may be modified by occasionally moistening the latter with a solution of boracic acid

Absorption of cocain solutions by the skin is very slight, and applications to it produce practically no effect This is even true concerning long contact of strong solutions with the carefully prepared and extremely thin integument of the lid so that the possibility of operation depends largely upon the patient's endurance Subcutaneous injection however, may cause a very complete anesthesia of all immediately surrounding tissues The extent of its influence depends principally upon the anatomic peculiarities at the point of injection, and, broadly speaking, bears inversely a close relation to the density of the tissues The superficial layers of the skin are always last to lose sensibility, hence the injections should, when possible, be made directly into it About the eyelids, however, the skin is so very thin and so readily affected, that it is of less moment The needle punctures are painful, and their number should be reduced as much as possible by employing a long needle and thrusting it in the direction of the projected incision By gradually emptying the syringe during its withdrawal, a considerable region can be reached at each puncture This familiar procedure is of great value, especially when for any reason general anesthesia is undesirable, but there are several drawbacks to its routine use Owing to the number of punctures required, and the peculiar construction of the injecting syringe, the greatest care is necessary to prevent the introduction of septic matter, and consequent serious interference with the healing process The danger of serious results from such a mishap is of course greater where the tissues are subjected to violence of the kind necessary in transplantation

Another objection is based upon the violence done the tissues by forcibly introducing an irritating fluid, the chemical and physical effects of which must influence unfavorably the nutrition of the flaps In the various forms of grafting this objection holds with peculiar force, because here the one grave danger is death of the graft While the matter is to some extent one of idiosyncrasy, and not easy to anticipate, the danger of serious and even fatal intoxication by cocain must be guarded against by using solutions not exceeding 2 per cent in strength, and never injecting more than 2 to 2 5 grains The recumbent position also decreases the danger Finally, it should be remembered that cocain has little power over very hyperemic and inflamed tissues Very briefly then, my conclusions may be stated as follows

1 Plastic surgery about the eye requires complete and prolonged anesthesia with the minimum of risk to the patient, and which can be induced without impairing the life of the tissues, or infecting the wounds

2 Ether, among general anesthetics best meets these demands The method of administration should be simple, cleanly, and avoid encroaching upon the field of operation

3 Cocain is the only suitable local anesthetic For the conjunctiva it may be applied to the surface in 2 to 4 per cent solutions When the skin is involved, subcutaneous injection becomes necessary The punctures should be few and the dose not exceed 2 5 grains

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TRANSPLANTATION OF SKIN IN PLASTIC OPERATIONS ON THE EYELID

Read in the Section on Ophthalmology, at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md, May 7-10 1895

BY WALTER B JOHNSON, M D

PATERSON N J

The transplantation of skin flaps in plastic operations upon the eyelid, by the method in vogue at present, is the result of a gradual development in the size of the portions of new tissue to be transplanted The method of supplying new dermal tissues where loss of skin had resulted from accidents, burns or other causes, was originally introduced by Prof J L Reverdin, of Geneva, Switzerland, in 1869 It was called "skin grafting," and consisted in the application to granulating surfaces of very small portions of epidermis snipped from the skin of a living subject, care being taken that the dermis should not be included in the graft The grafts were applied to the diseased surfaces and resulted in the formation of new cicatricial tissue, which was undoubtedly the product of the proliferation of the transplanted elements Thiersch, Pollock, Bryant and others adopted the method, increasing the size of the grafts and including the cutis as well as the cuticle, believing that the proliferation occurred from the dermis as well as the epidermis Fiddes reported cases in the *Lancet*, of new tissue formation resulting from the proliferation of epidermal scales scraped from the skin by a long bistoury The method rapidly came into general use, it is, however, only skin grafting, the implantation of a nucleus for the formation of cicatricial tissue and not transplantation of true skin

The implantation upon granulating or fresh cut surfaces of large skin flaps from adjoining parts was introduced by Tagliacozzi many years before the possibility of skin grafting was thought of He carefully dissected a portion of skin from a point near the surface to be covered, retaining at its base a pedicle through which the flap was to receive its nutrition Modifications applicable to various locations were suggested by different operators The procedures recommended for the plastic surgery about the eyelids were not wholly satisfactory, in consequence of the unsightly cicatrices at the point of removal of the flap, the thickening about the pedicle and the frequency of ulcerative processes intervening, which resulted in still more serious deformity than existed prior to the operation

In 1878, Mr J R Wolfe, of Edinburg, reported in the London *Medical Times and Gazette* of June 3, a new method of "the transplantation of skin flaps from distant parts without pedicle" Following this, operations were successfully performed and reported by Wadsworth, Noyes, Aub, Mathewson and others The many advantages of the procedure led to its immediate adoption by ophthalmic surgeons The object of the operation is the transplantation of healthy skin flaps to the required situation, the agglutination and healing by first intention, the permanent adhesion of the healthy new tissue at the point of implantation, and the relief of the existing deformity

The skin selected for transplantation must, as nearly as may be, approximate the conditions and quality of the skin at the location to which it is to be transplanted, an allowance of fully one third must be made for shrinkage of the flap, all areolar tissue must be carefully removed, the flap must be dipped in tepid water and then thoroughly dried, the site of operation must be carefully prepared, and if the transplantation is to be made on the day of operation, all small blood clots and other detritus must be removed In some cases it is desirable, especially if arteries have been tied, to allow an interval of two or three days to elapse between the time of the preparation of the wound and the application of the flap, as sepsis may affect the flap if sloughing of any of the tissues occur Before transplantation the granulating surface must be very carefully washed and dried, the prepared flap is then applied and gently pressed into position where it will adhere like sticking plaster The wound is then dressed, no sutures are recommended, although in many of the cases reported, catgut or other sutures have been used, sheet lint compress and bandage is applied and allowed to remain *in situ* for four days Great care should be used in removing the dressing, lest the flap be torn from its new adhesion by dragging Gold beater skin plaster is often used next to the flap

The following case was operated upon successfully by the Wolfe method

H T, age 3, colored Applied at the Paterson Eye and Ear Infirmary for treatment, stating that six months ago he had received an injury of the right eyebrow from falling upon a stone step The injury was followed by excessive swelling and subsequent inflammation The family physician made an incision and a large quantity of pus was evacuated The wound closed on two occasions and re-incision was necessary Extensive destruction of the skin of the upper eyelid resulted from ulceration which occurred during the stages of acute inflammation and was never at any time entirely healed The contraction of the cicatricial tissue thus formed produced complete eversion of the upper eyelid as shown in plate No 1

August 2 Upon admission, the child was in apparently good physical condition There was eczema about the face resulting from the excoriation of the ichorous discharges from the eye The ectropion of the right upper eyelid was so extensive that cicatrical tissue about 3 lines in width separated the ciliary margin of the lid and the eyebrow The everted palpebral conjunctiva was swollen, thickened and rough, bleeding upon the slightest touch Almost all of the retro-tarsal fold was exposed and it nearly concealed the eyeball, there was a deep central ulcer of the cornea and a constant discharge of thick muco-pus

The patient was etherized and an incision made, exposing the frontal bone which was diseased The carious bone was removed and the wound dressed After the opening closed, the ulceration healed, the swelling of the lid decreased under proper diet and palliative medication The cicatricial contraction resulted *in an increased eversion of the lid*

September 25 The patient was again etherized, and an incision was made midway between the brow and the edge of the lid $1\frac{1}{8}$ inches in length, the lid was carefully dissected, the attachment of the cicatricial bands divided and the edge of the upper lid stitched to the lower The result of this procedure was a large gaping wound $1\frac{3}{8}$ inches in length and $\frac{7}{8}$ inch in width in the median line An elliptical incision was made on the inner side of the left thigh $2\frac{5}{8}$ inches in length and $1\frac{1}{4}$ inches in width at the largest diameter of the ellipse The skin within the lines of the incision was carefully dissected from the leg and all areolar tissue removed After preparation, the flap measured nearly two inches in length and about one inch in width in its widest part The flap and the wound were rendered aseptic, four fine catgut sutures were used to unite it to the edges of the wound, gold beater skin plaster was then placed over the new lid and the eye dressed with a compress bandage

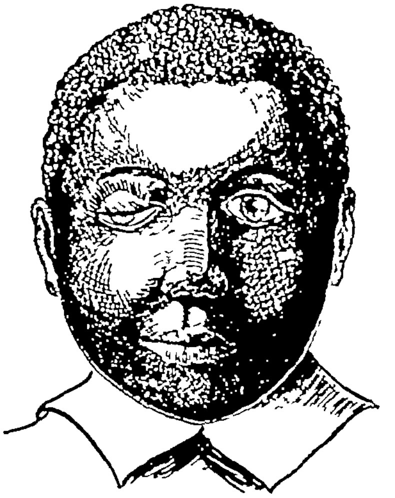

Figure 1

September 29 The dressings were removed, care being taken to prevent dragging upon the flap, the stitch uniting the eyelids and the stitches from the end and center of the flap were carefully cut and drawn out The transplanted skin flap seemed to have united in its new location although it presented a grayish appearance, externally, which looked like semi-transparent glass The pigment deposit in the deeper layers was so dark that it appeared as if sloughing of the entire flap was imminent There was no purulent discharge The eye was dressed with plaster and bandaged as before

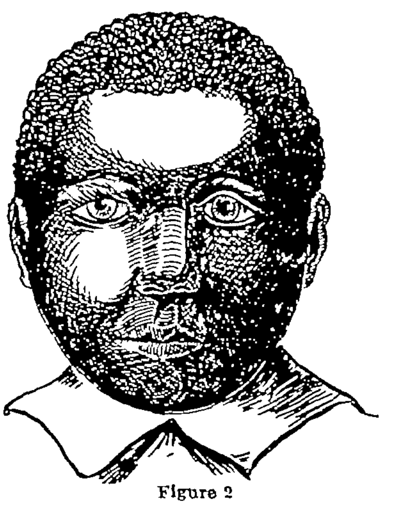

Figure 2

October 2 The dressings were again removed and a thin gray membrane nearly the size of the flap came away with the plaster This was at first believed to be the flap itself On closer inspection however, the entire surface of the new lid presented a peculiar appearance of semi granulation points of reddish color The excessive pigment deposit having materially lessened, a glazing which seemed to be the result of a deposit of thick viscid mucus indicated the *formation of a new layer of epidermis* The dressings were reapplied

October 4 The eyelid when exposed disclosed the presence of a grayish membrane with commencing pigment spots which covered the entire field of the operation

October 6 The membrane has assumed the appearance of newly formed skin, the lid maintains its natural position, there has been very little purulent discharge during the recovery After this date the skin became more natural in appearance, softness and pliability No unfavorable symptoms occurred There was complete relief of the deformity The eyelid could not, however, be elevated to the extent of that of the fellow eye The accompanying plate, No 2, illustrates the condition six weeks after the treatment was discontinued

SKIN GRAFTING ON THE EYELIDS

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association at Baltimore, Md , May 7 10, 1895

BY F C HOTZ, M D

PROFESSOR OF OPHTHALMOLOGY IN CHICAGO POLICLINIC
CHICAGO

Skin grafts play an important rôle in the plastic operations upon the eyelids, they are especially serviceable in certain forms of ectropium and entropium

1 *Skin Grafting in Ectropium* —If the destruction of the integument of the eyelid has been so extensive as to result in a more or less complete ectropium, the lid can not be restored to its normal position unless it be provided with a new integument

The material for this new covering may be obtained from three sources, to wit we may transplant upon the lid a skin flap from the vicinity, or we may graft upon it a piece of skin from the arm (Wolfe's method), or we may cover the whole defect with Thiersch's grafts

If executed under the proper aseptic precautions, these different plans are probably equally successful as far as the immediate healing of the implanted material is concerned And those who are satisfied with their work as long as it removes the ectropium, no matter how the eyelid may look after the operation, consider one method as good as the other But we come to a different estimate, if we demand of a plastic operation in the face that it should not only relieve the pathologic condition, but also restore, as well as it is possible, the normal appearance of the parts, or, in other words, that we should not be satisfied with the mere removal of the ectropium, but insist that the operation should also give back to the lid its normal shape and mobility

The normal integument of the eyelids is a thin, soft and light cover which snugly adapts itself to the contours of the lid and to all its movements, which play so important a rôle in the facial expressions It is, therefore, very essential that the new substitute possesses all these qualities of the original lid skin it must be thin and soft, in order to bring out the normal shape of the lid, and it must be light, so as not to impede by its weight the movements of the lid This latter condition is of particular importance in the operation for ectropium of the upper eyelid Skin flaps taken from the vicinity occasionally—but very rarely—possess all the conditions necessary for a perfect cosmetic result, usually they are too thick and too heavy to make a nice looking eyelid The same objections apply to Wolfe's flaps, which, in my opinion furnish the least suitable material and should never be employed for plastic work on the upper eyelids

There remains then for our consideration Thiersch's skin grafting operation, which I regard as a priceless accession to plastic surgery, for it has solved the difficult problem of repairing the eyelids with a material possessing all the important attributes of the lid skin, and it gives us results in every respect superior to what can be achieved by the transplantation of skin flaps

How skin grafting should be executed, what rules and precautions should be observed to attain the best results, I think, can best be shown by briefly describing the way of proceeding in a case of ectropium of the upper eyelid An incision is made through the cicatricial tissues along the line of the border of the everted lid, and while the lid border is then drawn downward, all resisting cicatricial bands are cut transversely by gentle passes of the scalpel This dissection is continued until the lid can be easily inverted and its free border can be drawn downward far beyond its normal position so that it describes a convex line In this position the lid border must be fixed during the healing process, and this is accomplished by three ligatures, which are passed through the lid border and securely fastened on the cheek by adhesive plaster strips But if there exists, *also*, an ectropium of the lower lid of the same eye, I pass the ligatures through the border of the everted lower lid and tie to it the border of the re-inverted upper lid

The object of thus fastening the operated lid is twofold 1, to make the surface which is to be covered with skin grafts, so large that the new lid skin will not become too short by the subsequent inevitable contraction of the tissues, and 2, to keep the lid immovable during the healing process, because any movements would displace or wrinkle up the grafts and render impossible their adhesion to the lid surface

When the lid is properly fastened, the wound is temporarily covered with a gauze compress wrung out of a 5 per cent salt solution, and we proceed with cutting the grafts The most convenient place to take the grafts from is the right or left arm The arm we intend to operate upon has several hours previously been thoroughly washed and scrubbed with soap and water and wrapped in a compress wet with the salt solution The bandage being removed, I grasp the arm firmly with the left hand, in order to hold the skin well stretched between the thumb and the fingers With my right hand I seize the razor, lay its blade flat upon the well wetted surface of the arm and press it down just enough to make its sharp edge bite into the skin, but no deeper than the papillary layer By slow and short sawing movements the blade is now steadily pushed on in the papillary layer until a piece of epidermis of the desired size has been gathered on the razor blade During this "shaving process" my assistant is dropping salt solution upon the blade and pushes with a probe the skin shaving back from the edge of the razor When I wish to cut the shaving off, I turn the edge of the knife a little up, while my assistant presses the probe flat down upon the shaving near the edge of the razor blade Now the compress is removed from the lid, the wound is carefully cleansed of all coagulated blood and the skin shaving is transferred directly from the razor to the lid surface For this purpose plenty of salt solution is dropped on the razor to keep the graft floating, if, now, the edge of the razor near its point is brought in contact with the border of the wound, the solution will run off from the razor and carry the graft with it, but as soon as the solution begins to flow and the edge of the graft has come in contact with and clings to the wound border I slowly draw the razor from under the graft across the wound, by which maneuver the skin graft floating from the razor is at once spread out smoothly over the lid surface

Some advise to place the grafts as they are removed, in salt solution until the requisite number is cut and then transfer them from the solution to the lid I regard this as an unnecessary complication of labor, for in the solution the grafts curl up, and it takes then a great deal more time to uncurl and spread them out smoothly than if they are transplanted directly from the razor to the wound

It is not necessary to cover the whole wound with one single graft, but, on the other hand, I think better results are obtained if the grafts are few and large than if they are very many and very small It is not difficult to cut shavings from one and one-half to two inches in length and from one to one and one-half inches in width, if only the knife blade is operated by a steady hand and moved in the same plane

When the whole wound is well covered with these skin shavings, I cover them with two layers of strips of silk protective moistened with the salt solution, they are one-half inch wide and long enough to lap over the wound border on both sides, one layer is placed in a transverse direction and the second layer in a longitudinal direction These strips are covered with a compress which is to be kept wet with the salt solution, and finally a bandage is put on the well eye also, to stop all movements of its lids, because thereby alone we can insure the absolute rest and immobility needed for the operated eyelid during the healing process

This first dressing remains undisturbed for two days at least To remove it the compresses and strips of protective are thoroughly wetted with salt solutions, the grafts are rinsed with the same solutions, and fresh strips and compresses are put on After four or five days the good eye may be left open, after one week the ligatures may be removed, and during the second week the grafted lid needs only to be daily rubbed over with iodoform ointment, for at this period there is a constant desquamation going on and the lid becomes uncomfortably stiff and crusty with exfoliated epidermis scales unless the surface is kept well anointed After the second week no further treatment is required The grafted skin undergoes a gradual contraction of about one-fourth of its area, but if this shrinkage has been anticipated by the operator, it will not affect the perfect cosmetic success of the operation

2 *Skin Grafting in Entropium* —The correct position of the eyelashes is so thoroughly dependent on the presence and correct positions of the free border of the lid that no permanent relief of entropium can be attained by any operation which fails to reconstruct the lid border As long as the tarsus is thin and elastic, the inverted border can be successfully turned back to its normal position by the operation introduced by me in 1879 But in the higher degrees of entropium, the tarsal cartilage has usually undergone structural changes and lost its elasticity to such a degree that its rigidity is a serious obstacle to the turning back of the free border Under these circumstances the re-position of the inverted lid is possi-

ble only, if a wedge-shaped piece is removed from the cartilage This operation, however, can be carried out successfully only in cases where the tarsus has sufficient thickness to allow the removal of a wedge of the requisite size, but in many cases we find the cartilage so thin and small that the cutting of a sufficiently large groove is impossible Under these circumstances skin grafting helps us over the difficulties, for if we can not turn back the inverted lid border, we may turn up the eyelashes and support them in their correct position by an artificial lid border made of a skin graft And although I myself once advocated a grooving operation[1] I have abandoned it, because I have convinced myself that the creation of a new lid border answers our purpose much better and is a less tedious operation than the grooving, beside it can be used in all cases of extreme entropium

The first attempt at creating an artificial lid border is found in Spencer Watson's operation, from this crude beginning the operation has been gradually improved by a process of evolution in the various transplantations of Gayet, Dianoux, Jacobson and others, until skin grafting has brought it to its present perfect and simple form

It is executed in the following manner the lid border is split into an anterior and posterior layer by the well-known intermarginal incision which is made so deep that the anterior layer can be turned up with perfect ease

Now I make a transverse incision through the lid skin and orbicularis muscle just below the upper line of the tarsal cartilage, excise the strip of muscular fibers covering the upper border of the tarsus and unite the lid skin with this upper border by three sutures, one suture being placed at the center of the wound and one at either side Each suture passes first through the edge of the lid skin, then through the upper border of the cartilage and finally through the upper skin border of the wound When these sutures are tied, the lid skin is drawn upward and fastened to the upper border of the cartilage, and this traction upon the lid skin is sufficient to cause a thorough eversion of the anterior edge of the split lid border, and when the anterior edge is thus everted and drawn away from its posterior edge, the intermarginal incision is transformed to a gaping wound of several millimeters in depth and with sloping edges This groove is to be filled by a skin graft Sometimes I have used for this purpose a narrow strip trimmed off with scissors from the skin edge of the lid wound, but I prefer taking the graft from the skin behind the ear where the skin is of a firmer texture and where the presence of a smooth bone surface to which the skin is so closely attached is a great assistance in the accurate cutting of these long and slender grafts, for as they are to be but from 1 5 to 2 millimeters in width, it is very essential that the skin does not drag before the knife, because this would make the edges so ragged as to render the graft unfit for use

I first make a longitudinal incision 1 millimeter deep and as long as the graft should be A second incision is then made parallel to the first one at a distance of 1 5 to 2 millimeters according to the width of the intermarginal groove the graft is intended to fill This second incision is made to join the first one at both ends and also to meet it at the depth of 1 millimeter, by giving the scalpel the proper slanting direction The long and narrow strip of skin thus mapped out by the two incisions is seized by a fine forceps, completely dissected off and transferred directly to the lid border which is carefully cleansed from blood coagula before the graft is put in place The graft is spread out and gently pressed into the groove, if it fits accurately, the lid and the conjunctiva are once more irrigated with the salt solution, and both eyes are covered with compress and bandage in order to stop all movements of the lids After twenty four hours the graft is already firmly adhering and the bandage can be left off

Should the graft be too long or too wide, its ends or edges can be trimmed with a pair of fine scissors without taking the graft off from its new resting place

The surface of the graft should be even with, or a little below, the edges of the wound, it should never protrude beyond them, if it does, it is too thick and should be cut thinner To do this, I turn the graft over with its epidermis side down and shave off a little of the cutis with a pair of fine scissors, and then put it back in place

If, after twenty-four hours, the graft is not adherent, it is dead and useless, if it is adherent, the success of the operation is assured During the first two weeks the epidermis of the graft comes off in scales, and it is therefore advisable to keep the new lid border well lubricated with vaselin, lest the dry and hard epidermis scales irritate the eye After two weeks the surface of the graft becomes smooth and can hardly be distinguished from the rest of the lid border

I regard the solid skin grafts described above, a better material for the reconstruction of the lid border than grafts of the Thiersch kind, or of mucous membrane We must not forget the intermarginal wound being an angular groove, has the great tendency of closing up from the bottom and of drawing its edges together This tendency is successfully overcome by filling the groove with a solid graft, but not by only lining it with mucous membrane or epidermis shavings

The use of true skin for grafting has been objected to on the ground that it contains fine hairs which would be a source of irritation to the eye Judging by my own experience, I should say this fear is groundless I have never seen any hairs grow in such grafts and I am inclined to the belief that when such irritating hairs are found, a careful inspection will show they do not grow from the graft, but from the posterior edge of the lid border, they are eyelashes which have been left in the posterior edge when the lid border was split

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ON THE OPERATIVE TREATMENT OF THE SEVERER FORMS OF ENTROPIUM AND TRICHIASIS

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md., May 7-10 1895

BY HERMAN KNAPP, M.D
NEW YORK

Nothing original is claimed for what I have to say I merely beg to submit to your judgment my preference for a method of treatment, as it has developed by personal experience during years of labor in one of the most common fields of ophthalmology With your permission, I will introduce and exemplify my remarks by the report of a case, the only one I shall report

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[1] Paper read before the 9th International Medical Congress 1887

Dec 6, 1890, Mrs F W C, of Boston, came to me with chronic trachoma Both eyelids turned in, lashes irregularly scattered over the rounded free margin, many on the inner edge Pannus over the whole cornea V, 20–200 The inner surface of the lids showing an irregular network of cicatrices with projecting islets of swollen mucous membrane between the fiber tracts (xerosis glabra) Palpebral fissure narrowed Constant lacrymation, some mucous discharge, incessant irritation Daily touchings with the sulphate of copper crystal did not relieve her very much

Operation Dec 31, 1890, at the hospital First an ordinary canthoplasty was made to enlarge the palpebral fissure Then a clamp was applied to the upper lid and an incision of about 3 mm carried through the whole length of the intermarginal space It ran from the inner edge of the lid margin, obliquely backward and upward, so as to comprise the cilia and their roots in the outer flap

Then I incised the skin and muscle of the lid 3 to 4 mm above the ciliary border and removed a strip of skin (1 5 mm broad) from the whole upper edge of the incision, and placed it on the sterilized forehead of the patient A small strip of the orbicularis was excised, and a longitudinal wedge-shaped piece cut out of the tarsus Four sutures were passed through the ciliary flap, the upper border of the groove in the tarsus, and the upper skin flap They united the wound, broadened the gap in the intermarginal space, and turned the whole ciliary border of the lid outward After cleansing the groove in the ciliary margin from the blood with a 1 to 5,000 solution of bichlorid of mercury, the skin flap was taken up from the patient's forehead and inserted into its wedge-shaped trough When it was well adjusted and the hemorrhage stopped, the wound was dressed with a patch of corrosive sublimate gauze, greased with benzoate of mercury salve and covered with a thin layer of absorbent cotton, held in position by court-plaster strips

The lady had pain for an hour The dressing was changed daily The implanted flap took root in its whole extent The sutures were removed on the sixth day

The other eye was operated on in the same way, and with the same result The patient was completely relieved She left the hospital on the twelfth day The inner surfaces of the lids were treated with sulphate of copper for some time During the next three years several mild relapses of trachomatous inflammation occurred, which were speedily cured with the copper crystal The restored intermarginal space kept broad and even, no more inverted eyelashes

The lashes stood in a row, all directed forward and upward The cornea had cleared up, the patient could read with ease, and I have not heard her complain since On inquiry a few weeks ago, she answered that her eyes had not given her any trouble She said that for years before the operation she did not know what comfort was

This, Mr President, is the first case I operated on according to this method Since then my hospital associate, Dr R O Born, and myself have operated on a number of severe cases of entropium and trichiasis in the same way with a good deal of satisfaction

The operative methods for entropion are legion For the more marked cases I long ago acquired a preference for the Streatfeild-Snellen operation The method of Jaksche-Arlt, raising of the ciliary border, is very old, having been practiced by Aetius (about 500 A D) and Paul of Egina[1] (about 675 A D) It yields very good primary results, as most entropium operations do, but all the cases I have operated on according to it, showed a gradual shrinkage of the intermarginal space gained by the operation and a return to the previous condition

The different procedures during the last twenty-two years, to combine a plastic operation with the other methods have interested me greatly I tried some of them, for instance, that of Burchardt,[2] of Berlin, which consists in implanting into the split intermarginal space a strip of skin taken from the upper lid over the cilia, the ends of the strip remaining attached In one of my cases an unpleasant ulceration of the cornea resulted Though the method could not be blamed for this occurrence, I have abandoned it, because I was not satisfied with the appearance of the flap shifted over the outer border of the ciliary edge, the ends of the flap remained raised and the intermarginal space was not so regular and even as when a flap without a pedicle had been inserted Flaps with a pedicle seem to have first been used and described by Spencer Watson,[3] flaps without pedicles by Waldhauer[4] He was followed by W T Smith, of Chicago, Ill, "A New Operation for Distichiasis or Entropium (*Arch of Ophthal*, 1887), v Hippel, Fuchs, Franke, Raehlmann (*Deutsh Med Woch*, No 1, 1891)

Dr J M Ray, of Louisville, Ky, who published a case of pedunculated flap in the *American Journal of Ophthalmology*, 1892, p 142, writes me that he has since then tried the transplantation of skin along the lid margin in seven cases, in five of them without a pedicle He says "In extreme cases of trichiasis it has been the best method I have ever tried"

An objection has been made to this method, viz, that the fine hairs which grow on the skin of the lid will after the transplantation irritate the cornea I have not heard patients complain of this condition, but Dr Born has seen hairs coming through the transplanted flap, evidently eyelashes whose roots were left in the posterior (conjunctival) flap He therefore excises these roots before he implants the skin flap

The objection of the hair growing on the transplanted skin flap has determined Lidner[5] to transplant into the incised lid margin a pedunculated flap from the conjunctiva, and Van Millingen[6] and Benson[7] have transplanted unpedunculated flaps of mucous membrane taken from the lips where the mucous membrane joins the skin

I have not tried flaps of mucous membrane, as the skin flaps thus far have given me satisfaction[8]

To recapitulate

In severe cases of entropium and trichiasis, good results can be obtained by an implantation of skin into the intermarginal space of the lid The steps of the operation are as follows

1 Ordinary canthoplasty

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[1] Anagnostakis Contribution à l'histoire etc Athens

[2] Charité Annalen, 1882, p 633, u Centralblatt, f pr, Aug, Oct., 1887

[3] On a new operation for distichiasis with a successful case Roy, London Ophth Hosp Rep VII, 1873

[4] Klin Mon f A 1883, p 482

[5] Allg Wien Med Ztg 1876, No XXVI

[6] Ophthalmic Review, 1888

[7] Blepharo Cheiloplastic Operations, American Journal Ophth, 1891, p 149

[8] I have tried them since The results were good, but no better than with the skin flaps Oct 9 1895

2 Incision of the intermarginal space according to Jaksche Arlt

3 Curved incision of the skin, 3 to 4 mm above the ciliary border Removal of a small strip of muscle along this incision

4 Grooving of the tarsus according to Streatfeild

5 Passing sutures through the lower lip of the wound, the upper edge of the tarsus, and the skin of the upper lip

6 Detaching from the upper lip of the wound, with a straight pair of scissors, a strip of skin, 1 5 mm broad and as long as the incision in the intermarginal space, and implanting it into the gaping and cleansed incision Sutures may be used, but are not essential

7 Tying the skin tarsus sutures, four or five in number The threads may be cut short, or stretched and fastened to the skin above the brow by collodion (Panas) or strips of plaster (Born) if the free edge of the lid is not sufficiently everted

8 Dressing with bichlorid gauze, greased with a salve, or leaving the eye uncovered

9 Cutting the sutures in from three to five days Cleansing the eye every day, very gently so as not to disturb the implanted flap, or leaving the dressing undisturbed for a week The flap in almost every case unites in its whole extent

This plan of operation is to be simplified or modified, according to the conditions of the case

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CASE OF EPITHELIOMA OF EYELIDS PLASTIC OPERATION, WITH EXHIBITION OF PATIENT

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md May 7-10 1895

BY HERBERT HARLAN, M D
BALTIMORE MD

After a large number of experiments in the removal of malignant growths affecting the eyelids, or their immediate vicinity, by caustics and various surgical procedures, I have come to the conclusion that the best method is extirpation by the knife and restoration of lid by plastic operation, and as a good example I present the following case

Basil Shipley, farmer, age 60, from Carroll County, Md, was first seen by me March 1, 1892 At that time he had what was evidently (I speak from a clinical standpoint) an epithelioma of inner side of left eye It involved the inner margin of both lids, the upper to about one fifth its extent, and the lower to nearly or quite one-third, and extended over or to the side of the nose Roughly speaking, it covered a surface the size of a quarter of a dollar

Two previous operations had been done, one by a prominent surgeon, and one by a skilled oculist Each operation had been followed by a prompt recurrence, with increase of symptoms

The lacrymal sac and both canaliculi were involved The patient was put under chloroform at the Presbyterian Eye, Ear and Throat Hospital, and the whole mass freely dissected away A very large gaping wound, certainly as large as half a dollar, was left After the bleeding had been pretty well checked, a balloon shaped flap was dissected from the forehead, twisted down and carefully stitched in position with silk I regarded it as quite impossible to preserve any tear duct, and made no attempt to do so The forehead wound was closed by a single row of sutures Iodoform and gauze was used as dressing and the healing was uneventful He returned in March of this year and a small growth down on the nose was burned freely by the galvano cautery The ectropion which you see, while unsightly, I regarded as harmless, and did not advise further operation

DISCUSSION ON PAPERS OF DRS ZIMMERMAN, JOHNSON HOTZ, KNAPP AND HARLAN

Dr R A Reeve, Toronto—My experience with transplantation of flaps without a pedicle was given at the Canadian Medical Association in 1879, I think The first one was largely a failure The technique was not at fault but the patient had psorias and there was hardly enough healthy looking skin on the body to suffice for a flap As, however there was ulceration of the cornea from exposure I operated Another case of double cicatricial ectropion proved very successful I think it is important to maintain the union of the lids for a long period so as to diminish the ultimate shrinkage of the flap In another case the lids were kept united for several years though sufficiently open to permit useful vision The patient had nothing but cicatricial tissue from the chin to the nape of the neck There was complete *ectropion of all the lids, with keloid cicatrices* In using a flap without a pedicle in order to permit wearing of an artificial eye it is desirable to implant it as centrally as possible so as to get the minimum contraction Blepharoplasty by horizontal sliding flaps has given me gratifying results in a number of instances

Dr H V Wurdemann, Milwaukee—Referring solely to the first paper under consideration, I would say that there will soon come a time when *water* not *ether* will be deemed the only suitable anesthetic for nearly all operations connected with the skin The injection of cocain in percentages over .2 per cent (not 2 per cent) is harmful not only to life itself but to the life of the skin flap Injection in higher solutions is radically dangerous and should be abandoned in favor of infiltration anesthesia by injection of harmless fluids into the tissues I will not occupy your time at this moment by any further reference to the matter which I will sufficiently elaborate in the session of Thursday morning

Dr D S Reynolds, Louisville—I would like to have the last sentence of the first paper re read

Dr M W Zimmerman, Philadelphia—Cocain is the only suitable local anesthetic For the conjunctiva it may be applied to the surface in 2 to 4 per cent solutions When the skin is involved, subcutaneous injection becomes necessary The punctures should be few and the dose not exceed 2.5 grains

Dr Reynolds—I noted that point and wanted it repeated that it might be thoroughly understood I have seen a single drop of the 4 per cent solution applied to the conjunctival membrane produce almost instant pallor with cessation of the heart beat I have noted a dangerous reaction repeatedly and it has been referred to by others

Dr E J Bernstein, Baltimore, exhibited a patient When first seen she had lost both upper and lower lids and the entire nose by syphilis, and had a beginning ulceration of the cornea due to lagophthalmus

Dr Lucien Howe Buffalo—In regard to putting the flap in hot water, it would seem to me to be entirely unnecessary when the transplantation is made without difficulty Promptitude seems of considerable importance

Dr J P Worrell, Terre Haute—I have made a number of grafts introducing skin from back of the ear or more frequently mucous membrane from the lip It is rare that one fails to get union When there is entropion I did not find it necessary to make the graft It has seemed to me that if you can make an operation somewhat like Dr Hotz,' with the incision posterior to the ciliary margin, we shall get such a contraction that we will not have a return of the entropion I have some cases operated upon some years ago and the results are still satisfactory I dissect down the skin absolutely to the ciliary margin and remove all of the palpebral part of the muscle, strip the cartilage entirely From the cicatrization that follows I have never yet had reversion to the entropic condition I always do these operations under cocain and have never yet seen a single case of injury from its use I am inclined to think Dr Reynolds' case due rather to shock than to cocain

Dr P D Keyser, Philadelphia, here exhibited a photograph of a case of transplantation for epithelioma of inner canthus operated upon by him over one year ago successfully and in which there had been no return of the entropion I find too that grafts take equally as well on cicatricial tissue as any other

Dr S D Risley, Philadelphia—I have now quite a group of interesting lid cases in which I have done the grafting operation and I expect good results, even though the cartilage has been usually involved I take the graft from the forearm as described by Dr Hotz I do not think there is any call for any more serious operation

Dr G C Savage, Nashville—It is not often necessary to do extensive or bloody operations for entropion and trichiasis, nor can it often be necessary to transplant skin in an inter-marginal incision By means of the entropion forceps devised by myself, the blades of the forceps terminating in a stirrup as wide as a diseased lid is usually long, with a shoulder extending up each arm of the stirrup for one eighth of an inch, to compress the lid margin, a bloodless and effective operation can be done When the lid has been grasped by passing one blade of the forceps beneath, the other on the outer surface of, the lid is easily inverted and held in position At least one eighth inch of the lid margin is included in the fenestrum The forceps are closed tightly by means of a sliding clamp and the pressure thus exerted makes the operation bloodless The knife is used first for making the Burow incision the entire length of the tarsal cartilage and through all structures down to the skin and one eighth of an inch from the free margin This done, a vertical cut is made from either end of the Burow cut, in the lid margin through all the structures down to the skin, and two similar cuts are made at equal intervals between these The operation thus completed the forceps are removed, when there follows a good deal of bleeding The Burow incision widens the lid, my vertical cuts lengthen it, and the two together effect a complete out-turning of the lid margin One or more times daily the lid should be slightly everted so as to make the wounds gap widely that the deposit of new tissue may be as abundant as possible The operation is easy and its results effective

Dr Frank Allport, Minneapolis—In view of the fact that we have in the operation of Dr Hotz a procedure almost universally successful for the relief of entropion, it seems hardly necessary to multiply operations I have used this process for fifteen years and have been almost universally and permanently satisfied with the results In extreme cases it is usually necessary to combine with it a suitable canthoplasty and when thus applied there are but few cases in which satisfaction will not be achieved It is an operation requiring exactness and deliberation and where failures are noted it may be because these elements are wanting

Dr Hiram Woods, Baltimore—In an operation for upper lid entropion, performed yesterday by Dr Savage as he had described his operation, the primary results were excellent As Dr Knapp says, many cases show this good primary result but later relapse This seems specially true of the Arlt operation Green's operation has been used a great deal within the past few years at the Presbyterian Eye and Ear Hospital with excellent permanent results as observed in cases two or three years old

Dr Herman Knapp, New York—I want it understood the mode of operation which I have sketched refers in its whole extent only to extreme cases Canthoplasty is necessary in many cases because by a general shrinkage of the conjunctiva and tarsi, a more or less marked blepharo-phimosis is present When the tarsus shows extensive cicatricial contraction on the conjunctival side and irregular thickening and curving in of its body with no intermarginal space preserved, the excision of a wedged-shaped slice on the outer part of the tarsus and the restoration of the intermarginal space is indispensable The strip of skin can be most conveniently taken from the upper border of the elliptical wound when the sutures are inserted but not tied The strip is then immediately placed into its bed at the edge of the lid I have seen the inter-marginal space thus gained nicely preserved years afterward

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Exercise for the Weary—The following is from *Puck* Dr Schmerz 'The trouble, Mr Tyers, is that you don't take enough exercise" Mr E Z Tyers "Aw, I confess I don't go in vewy heavy on athletics, doctaw What could you wecommend as a mild exercise to begin on?" Dr Schmerz "H'm! You might stretch your arms over your head when you yawn!"

POST-ALCOHOLISM

BY S V CLEVENGER, M D

Alienist and Neurologist of the Reese and Alexian Hospitals, Chicago,
Late Medical Superintendent of the Illinois Eastern Hospital
for the Insane, and Pathologist of the Cook County Insane
Asylum, Author of 'Comparative Physiology and Psy
chology," "Spinal Concussion," etc
CHICAGO

Ethyl alcohol, spirit of wine, is commercially assumed to be the base of intoxicating drinks, and the purest of these is capable of working great havoc when abused, but the demand for cheap liquor in vast quantities substitutes for portions of the less harmful ethyl or vinic alcohol what is known to chemists as the poisonous amyl alcohol (potato spirit or fusel oil) The aroma or bouquet of liquors is largely due to certain ethers of the more poisonous amyl and butyl alcohols, notably the acetic and valeric, then superadded, all too often, by distiller, rectifier, wholesaler, and especially by the retailer, are sophistications, flavors and perfumes for the purpose of cheapening the resulting compound, which, by the time it reaches the average consumer, contains in addition to the alcohol diluents to increase bulk, articles to give it false strength, fictitious appearance, odor and taste

In the English Licensing Act of 1872 (35 and 36 Vict c 94) there is a schedule of substances called "deleterious ingredients" found to have been used in adulterating intoxicating liquors, they are cocculus Indicus, common salt, copperas, opium, Indian hemp, strychnin, tobacco, darnel seed, logwood, salts of zinc or lead, and alum Since then, ingenuity and cupidity have extended the list indefinitely among dye materials, both organic and inorganic, and there are also added correctives of acidity, such as litharge, lime, soda, potash, astringents like catechu, oak bark and aloe leaves, earths for decolorizing, sweetening agents, and ethers for flavoring Most of these articles are unwholesome, to say the least, and tend to debilitate and otherwise set up depraved bodily states

Chronic alcoholism in its most obvious features is a condition of functional poisoning such as is seen in its production of lethargy, stupidity and acute narcosis Less noticeably, but gradually, it operates as a tissue poison, affecting parenchymatous elements, particularly epithelial and nerve structure, if not to a greater or lesser degree all the cellular components of the body A slow degeneration is produced until the blood vessels are involved in thickening and fibroid changes Oxidation of tissues is checked, since alcohol is consumed in place of the fat, leading to fatty changes which may advance to general steatosis

Dr Magnus Huss, of Stockholm, in 1849 first prominently directed the attention of physicians to the subject of alcoholism, a term he was the first to use He described the paralytic and anesthetic forms of chronic alcoholism, also later referred to by Hammond ("Diseases of the Nervous System," 1881), Ross ("Diseases of the Nervous System, 1885), and other neurologists

Gowers ("Diseases of the Nervous System," vol i, 110, *et seq* 1892) under the heading "Multiple Neuritis," gives still more recent details of these distressing consequences of drinking alcoholics

Magnan (*De L'Alcoolisme des diverses formes du Delire Alcoolique, et de leur traitement*, 1874), Virenque, Hammond and others observed an occasional loss of sensation involving only one lateral half of the body, as in hysteria The other special senses are generally implicated Thus the patient loses the sight of one eye, can not hear with one ear, can taste with only half the tongue, and smells with but one nostril

Gowers (op cit 119), states that alcoholic polyneuritis is most frequently met with and preponderates over all other forms of nerve inflammation It results chiefly from the stronger forms of alcoholic drinks, and especially from spirit drinking It is more common among those who take small quantities frequently, than among those who indulge in an occasional spree, probably because the total quantity is greater by the former It is far more frequent among women than among men, probably three times as frequent Other causes often cooperate with alcohol in exciting polyneuritis, especially exposure to cold, and, in the poor, insufficient nourishment

The symptoms consist in motor weakness, sensory disturbance and incoordination The weakness involves first and chiefly the flexors of the ankle and extensors of the wrist and fingers in the forearm, the result is wrist-drop and foot drop Other muscles suffer in severe cases The sensory symptoms are tinglings, pains, varying in place and degree, tenderness and loss of cutaneous sensibility The incoordination resembles that present in the slighter forms of locomotor ataxia

Neuritis is the most common finding in chronic alcoholic autopsies

Catarrh of the stomach with furred tongue, heavy breath, a feeling of epigastric distress or "sinking," impaired appetite and constipation are ordinarily experienced

The liver may undergo changes leading to various *forms of cirrhosis* Sometimes moderate drinking may reveal a special liability to hepatic cirrhosis, while, on the other hand, hard drinking for thirty years may leave the liver nearly *intact*

The stomach and liver disorders of drunkards produce dilated veins of the cheeks and nose, causing suffusion of those parts, acne rosacea The eyes are watery, the conjunctivæ hyperemic and often tinged with bile

Formad claims that the kidneys are hypertrophied without other change as a rule, and Guy's Hospital Reports verify this finding Pitt places this as occurring in 43 per cent of hard drinkers, and where the typical granular kidney occurs it is indirectly caused by arterial changes (Osler, "Practice of Medicine," 1001, 1892)

The greatest variability in general manifestations can be found in different patients amounting to idio syncrasies in particular cases, and in other *patients* are classifiable into groups of a great or less number

The *organic changes seem to be erratic*, but are according to the resistance of organs As a forerunner of serious alterations in the spinal cord, neuritis is not a simple and harmless disorder

Magnan has demonstrated an alcoholic paraplegia in which Buzzard found electrical degeneration reaction Some cases end fatally, though Bramwell ("Diseases of the Spinal Cord," 307, 1884), considers it for the most part functional Broadbent's description (*Medical Times and Gazette*, Feb 16, 1884), in which myalgic pains, hyperesthesia and double *wrist-drop* is included, should be compared with the pathologic changes found by Eichorst, of Zurich (London *Lancet*, May 19, 1888), attending alcoholic neuritis, in cases of incoordination followed by paraplegia and wrist-drop, tenderness of muscles, anesthesia, abolition of reflexes and, finally, vesical and rectal paralysis The pathologic anatomy consisted in cord hemorrhages in the dorsal gray, thickened, blood vessels, degenerated and atrophied tibial and radial nerves with axis cylinders destroyed, the peripheral extremities were worst diseased, connective tissue proliferations of endo- and perineurium and *inflammatory changes* in their vicinity A muscular atrophy was secondary to the neuritis, the nerve sheath inflammation extended to the interstitial muscular tissue Bramwell notes that myelitis and other forms of organic disease may be caused by *alcoholic excess, hence the* paralysis may be permanent and incurable

The enfeeblement of judgment and will may finally end in dementia

Post-mortem does not show any particularly characteristic changes in the nervous system *invariable* for all cases of chronic alcoholism, showing that resistance is greater in some than in others Some times hemorrhagic pachymeningitis is observed with thickening and opacity of the pia arachnoid membranes and wasting of the convolutions, or there may be a chronic encephalo meningitis with membrane adhesions, but most of these pathologic states are in advanced cases of alcoholism, the more incorrigible sort, as can be readily believed when we note the fact of many chronic drunkards having been reclaimed and restored to the world about as they were before the habit was formed The older the patient and the longer the addiction, the greater probability would there be of finding organic changes in the brain and its envelopes and blood vessels

Many chronic alcoholic insane exhibit remarkably close resemblance of symptoms to those commonly found as the result of injury to the brain, in traumatic insanity These symptoms are changes of character, lapses of memory, headaches, sleeplessness, irritability, suspiciousness, long apparently lucid intervals, homicidal and suicidal impulses, delusions of persecution These peculiarities appearing in the alcoholic insane long after being incarcerated in an asylum, during which time no intoxicating liquor has been taken by them, point clearly to organic brain destruction, accomplished from within, but as severe and hopeless as when the brain had been injured by a blow upon the head, with subsequent extension of inflammation to the membranes and cerebral tissues

It is when the mental degradation which temporarily occurs in alcoholism becomes permanent that chronic alcoholic insanity may be said to exist During the acute stages there may be hallucinations, illusions and delusions which disappear on recovery from the blood poisoning, the persistence of some of these states betokens permanent damage to the mental apparatus, and the brains of the chronic alcoholic insane invariably exhibit evidences of destructive organic changes

It is with astonishing frequency that jealousy of the wife or mistress exists to an exaggerated degree in most forms of drunkenness, from simple suspicion to delusions of marital infidelity, which in extreme cases may originate hallucinations of gross amours being carried on in the patient's presence

It sometimes happens that the alcoholic may have grounds for suspicion in facts, but this *does not* lessen the delusional origin of his accusations A frequent outcome of the *notorious* marital unhappiness thus caused is a brutal wife murder, the body of the victim sometimes being found hacked to *pieces or* partly destroyed by fire. The insane fiend may make but a stupid attempt to escape, or none at all, either expressing surprise at, or doubt of the reality of the event or attempting justification in explanations

The memory and intelligence suffer gravely, though not always obviously, for it may require considerable familiarity with the former peculiarities of the patient to determine the degree of mental impairment, and comparisons of his past and present are often possible only when he has been under observation for a greater or lesser period, in some cases months may be necessary He may be able to attend to routine duties, but is inconstant and easily diverted The reasoning powers are lessened in varying degrees, and many such changes are not determinable off-hand

Delusions, particularly such as relate to the wife's unfaithfulness, are fixed, but not systematized, for his explanations concerning them are vague and illogical There is a melancholic persecutory tinge to all his ideas

Some cases of chronic alcoholism on the verge of chronic alcoholic insanity experience auditory hallucinations of mandatory and accusatory kinds, and these may become so distressing as to lead to suicide, homicide, or insane acts generally The dangerous character of insanity with auditory hallucinations is fully recognized by alienists

In asylums for the insane will be found many cases of insanity that have been complicated with alcoholism, particularly a peculiar form called traumatic insanity, the result of head injuries, after the receipt of which there is a remarkable tendency to drink to excess, and the alcoholism may be combined with the traumatic insanity in every conceivable degree, sometimes outrunning the original psychosis in its influence for evil Epileptics are sometimes incorrigible drunkards, and epilepsy may appear for the first time when an alcoholic has abstained from liquor for some unusual length of time In such cases there may have existed petit mal, unnoticed previously, or even convulsions may have occurred at night, during sleep, and after stopping the use of liquor the fits have appeared during the day, through the alterations in habits Any other form of insanity may have, to some degree, the impress of alcoholism to modify it, and where this complication is extreme, as it is frequently in the head injury cases mentioned (sunstroke victims fall into this category), there are characteristics in common with those of chronic alcoholic insanity that are well recognized by asylum physicians and that often cause considerable annoyance

Soon after the commitment of a chronic alcoholic insane case to the asylum or hospital, he appears to improve remarkably, if he escape the consequences of his last debauch and does not die of pneumonia or exhaustion, locked up at first in a ward, he is sooner or later trusted about the grounds and can be made very useful as a workman of some sort He may refrain from asking for a discharge for a long while for the purpose of convincing the superintendent of his recovery, but unless the patient conceal his delusions, as many insane do, he is liable, with a little questioning or in his letters to friends or relatives, to reveal the permanency of his delusions of persecution The writings of some of these apparently sane alcoholics contain the foulest abuse of mother, wife or children, without the least warrant for it in their former treatment of the patient

Sometimes a weak minded relative may be found espousing the cause of the "unjustly detained" alcoholic, or well-meaning but misguided friends may satisfy themselves of the "recovery," and even resort to habeas corpus proceedings to secure the patient's discharge

Under the watch and restraint of hospital sojourn and their gradual admission to parole, with occasional breaks thereof, many of these patients assume, to all appearances, their original mental condition To the superficial observer they are perfectly sane, many work cheerfully in the shops and talk quite intelligently about the possibility of relapses if allowed to go But a large percentage are importunate, and these are the least to be trusted, for their anxiety to flit is born of their inability to gauge their feeble will power to resist temptation If they are discharged, back they come, not infrequently with newspaper and other criticism of the hospital authorities for having liberated such a dangerous character These same critics are just as liable to write up sensational comments on the injustice of keeping perfectly sane persons at the behest of relatives who, the critics affirm, have some pecuniary motive in the patient's being deprived of liberty Nor is the trouble taken to inquire whether the county is charged with the case as a pauper or not.

When habeas corpus proceedings are begun, the natural inference is that there must be some malign reason for the detention Probably it is just as well in the long run that the public should be suspicious, but the conscientious hospital physicians are put to unnecessary trouble in explaining matters of pathology and general medical experience to laymen who are much more familiar with business affairs

The hospital physicians will congratulate themselves that cases of this kind are improving, and discuss the advisability of trusting them on parole, preliminary to letting them go home on trial, but the records of the cases suggest caution, such as domestic horrors, including attempted wife murder, brutality to children, improvidence to a criminal degree, the wife usually faring the worst, though when he is not drinking she claims her husband to be the "best and kindest of men"

Notwithstanding all this, such near relatives often beset those in charge of the hospitals to liberate their husbands, sons or fathers, poor ignorant creatures, because they can only see the hopeful side of matters for themselves, and can not appreciate the vast fund of information possessed by the doctors as to the frequently disastrous consequences of too early discharges, or, sometimes, any discharge at all

The alcoholic insane have been apparently sane while at the asylum, and even after ten years' trial when they were allowed to return home they would resume all their bad habits, such as furniture smashing, chasing the family into the streets with axes or knives, and after being returned to the asylum in a maniacal state they would resume all their apparent sanity and sweetness of disposition, which arouse the suspicion of the visitor that some unworthy motive on the part of somebody withholds so useful a person from society at large

Among the sadly comic instances of this kind appear liberations after carefully weighing probabilities and enduring the threats, entreaties and promises of the family and the patient, against the better judgment and misgivings of the physicians, and when something does occur from the risk, as too often happens, forthwith not only the public but the relatives censure the weakness of the doctors for having listened to them at all

A washerwoman, who had about as much experience with the inner life of a large city as some physicians acquire, used to dub the defects produced by alcoholism as "street angels and home devils" Much danger to the community exists in the seeming sanity of such cases There is no provision for their incarceration on the ground of their great liability to be homicidal, and when they do commit a murder it is a difficult matter for the public to comprehend the insanity during the quiet stage induced by imprisonment and liquor deprivation

Alcoholic dementia is simply a secondary or terminal dementia of profound type, that has usually supervened upon alcoholism, the intermediate stage of chronic insanity being often short, or having escaped notice altogether, as such, being merged from the general alcoholism It is as permanent and incurable as any other secondary dementia The organic brain and blood vessel changes in this, and other chronic alcoholic insane states often shorten the lives of patients, many succumb from pneumonia which proves so fatal to drunkards generally

Post-alcoholic conditions are such as become evident during abstinence after the protracted use of liquor

If the shock of abstinence is rallied from, we can then determine how much is left of the patient Destructive changes in the brain may be, to an extent, masked by drinking, that is, the behavior of the patient may be erroneously ascribed to the drinking when it in larger part may be due to brain alterations produced by over-indulgence

The extreme ground is taken that by whatsoever means recovery from habitual drunkenness is made, the health is never regained Dr Clum (*Quarterly Journal of Inebriety*, October, 1891, 382), observes that those who have been addicted to the excessive use of alcoholic beverages for a number of years may be restored to a state of sobriety but they are generally left with an entail of chronic disease which eventually ends their career They die temperance men, but die as a result of disease contracted by the excessive use of liquor The habit is abandoned and nature and remedies are given a chance to do their part toward reinstating the individual, but the vital organs have been injured beyond reparation

This gloomy outlook for the "reformed" inebriate concerns a large percentage of cases, but is far from being universal Drunkenness is not the only consideration, the health previous to and during the addiction should be regarded, aside from, as well as with, the drinking habit and its extent, the age, associations and conditions, such as exposure and immoral practices, as incidental or consequential matters, need consideration in ascertaining how far a breakdown is ascribable to drink or its stoppage

Heart weakness that had previously been compensated to some extent by stimulants, whether created by their use or not, often becomes apparent in post-alcoholic life Syphilis is known to have become modified and somewhat checked through the alcoholic poison acting upon the syphilitic poison, and when this antagonism ceases the syphilis has become more virulent Livers, kidneys nerves and brains that have been structurally degraded can not be restored by mere change of habit, indeed, paralytic states may become evident immediately after liquor withdrawal through the shock of readjustment to new vascular workings For example, when an alcoholic neuritis with membrane thickening and beginning spinal cord myelitis has been inaugurated through alcoholism, the sudden change in the circulation caused by abstinence will inevitably render the physical consequences of such inflammatory and neoplastic states more apparent *Pressure symptoms, debility, and marked* sensory and motor impairment are liable to occur, from monoplegias to complete paraplegia

Tremens begins during the abstinence of drinkers, and from circulation changes in the brain, temporary sobriety causes a dazed, bewildered mental state in the hard drinker Even were the craving destroyed, and were the will power to resist drinking to be imparted, by any means, too often the inebriate then finds himself so completely out of his environment, so changed are inner to outer relations as to what constituted his previous existence that he rushes back to his former habits about as a fish would take to water, and for analogous reasons

Hard drinkers are the first to succumb to epidemics, such as cholera and yellow fever, and abstinence merely uncovers the debased organic weaknesses that these epidemics coöperated with destructively

After prolonged use of liquor, abstinence sometimes is followed by acute melancholia in which the delusions of that psychosis are commingled with some that are peculiar to alcoholic insanity This depressed state seems to be owing to exhaustion of the system habituated to alcoholic sustenance, and not yet readjusted to the assimilation of proper food

A demented condition more or less profound may set in from the same causes A well-known stockyards millionaire of Chicago had, up to his sixtieth year, guzzled fusel oil in all its disguises as ethyl alcohol compounds, and a sharper shrewder person was hard to find, but he abandoned his drinking suddenly, utterly and completely, and during the succeeding three or four years gradually became incapable of attending to business, presenting the apathy, memory loss and other characteristics of what was known as "primary mental deterioration" but which Voisin claims to be "atheromatous insanity," the blood vessel destruction found post-mortem justifying the designation While this mental malady is often independent of alcoholic habits, its appearance as apparently connected with the stoppage of drinking is worth noting In those who indulge many years and then quit drinking, the alteration in behavior is quite observable, they are certainly quieter, calmer, and while doubtless far better off than when stimulating, the general tone is below what it used to be, or what it would have been had they not drank at all, meddling with fire must be at the expense of some scars While atheromatous insanity may occur in the temperate, a condition like it, if not identical with it, could readily be conceived as consequent upon abstinence after long addiction, or the pathologic condition mentioned itself could be directly induced by alcohol, and persist, whether alcohol is or is not taken after the condition is instituted The tendency to steatosis in the intemperate can be recalled in this connection and doubtless many cases of so-called dementia from abuse of alcohol may be found to be of Voisin's type of atheromatous insanity

The hyperemic state of chronic alcoholism necessarily alters the cerebral circulation in various ways in many, but not in all cases, causing endarteritis, leucocytic exudation, neoplastic organization and capillary extravasation into the cerebral tissues comparable to the rosacea observable in some drunkards' cheeks and noses In my autopsies of the alcoholic insane at the county asylum, I invariably noticed a rusty discoloration of the dura mater along the course of the superior longitudinal sinus, and other evidences of old inflammatory conditions such as adhesions of the membranes and cerebral tissue of the convexity and basilar regions The vascular and meningeal alterations varied in degree according to the patient's age Where frailty of blood vessel organization existed congenitally there was greater liability to pathologic change in such cases

The finer mental coordinations in any one are maintained by effort, being the latest faculties acquired, and their tenure being so dependent upon full brain integrity, it is plain that the moral nature has been superimposed upon the less easily destroyed brute nature, through finer and weaker histologic arrangements acquired and inherited, demanding for their exercise the clearest kind of brain activity Vitiated blood quickly blots out these better but feebler functions for the time being, just as exhaustion is felt first in our weakest joints So the moral nature, which is merely a higher intelligence, may depart when the seat of intellect is weakened by any cause such as senility, drinking, insanity, arrest of development, traumatism and some diseases

When certain pathologic adjustments, involving imperfect compensations, occur, such as thickened arterial walls which resist the increased flow of blood, then a new plane of mental operation is established, which, if disturbed by change of habits, as by withdrawal of the customary greater heart impulse, it is but partially and inadequately recompensated by the pure blood Practically, the adjacent cerebral tissue must suffer from anemia to a greater or lesser extent, and where previously the blood was driven through disarranged avenues, it now makes its way feebly and in places not at all Nor is this all, the sclerosed and otherwise changed tissue becomes a more prominent hindrance to function when the artificial nutrition and circulation is cut off So the poor fool of a drunkard is too often thus "damned if he does, and damned if he don't" continue

Summarizing post-alcoholic bodily and mental states there may be found many organic destructive changes in the blood vessels, liver, nerves and brain, which were not so evident during the addiction, owing to the somewhat compensatory effect of the alcohol, and hence the masking of diseases

The simple privation may kill through the weak heart losing its wonted stimulant, but such cases are not very common, debility is the most frequent consequence of "reform," but this is often a return to what preceded and may have led to the over-indulgence Cerebral blood vessels subjected to engorgement are liable to rupture at any time where weak points exist, and fatty degeneration of vessel walls, induced by the liquor, may culminate in apoplexy, whether drinking is continued or not

A single severe attack of delirium tremens may make profound changes for the worse in the future workings of the brain, and the typhoid stage of some cases of delirium tremens show the ravages of the poison often in life-long sequelæ

Chronic alcoholic insanity may make its first gross appearance after abstinence enforced in jail or otherwise

Necessarily, when liquor is withdrawn, a change for the better is ordinarily the rule, but such withdrawal in some cases may operate as a shock, and in all cases a readjustment of the entire physiologic make up must occur It is conceivable that epilepsy or insanity may find in such shock a potent exciting cause and the whisky soaking is ample as a predisposing influence, when it can alter the brain structure, in time, as thoroughly as a contusion or a concussion

But what the inebriate has drank, how long he has been drinking, and his power of resistance, associated diseases, hereditary and other tendencies, are to be taken into account, and with these it is surprising how large a number of heavy drinkers escape any obvious trouble due to such excesses A well-known druggist of Chicago was a sot until his fortieth year, stopped drinking and died at 70 years, having built up a large business, while others who had not taken half his risks with liquor succumbed during or after ceasing their bad habits

Post-alcoholic conditions such as insanity, paralyses, weak heart, etc, that occur in a minority of cases after alcoholic disuse, only the most thoughtless or perverted could use as arguments against the stopping of drink, as the liquor in such cases produced the trouble which merely culminated after the habits were changed, such climax, being inevitable in any case, and impending, might have been reached earlier, or in a graver form, had the inebriety continued

In a few words, drunkenness is a constant menace to the mental and bodily health, and it is far safer to escape from its ravages, scarred and maimed, than to go on sooner or later to certain destruction Though the vast majority may be rescued entire, or nearly so from intemperance, no one can tell what the chemic devil has left of him until months or years of sobriety have passed

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THE ESSENTIAL OF INSANITY

BY J SANDERSON CHRISTISON, M D
FORMERLY OF THE NEW YORK CITY ASYLUMS FOR THE INSANE, BLACK WELL'S ISLAND AND WARD S ISLAND
CHICAGO

If by insanity we simply mean more or less deviation from the free normal action of the mind, without regard to cause, then, indeed, no mortal is constantly free from it For as mental activity, in degree and range, is a measure of physical tone and proportion, especially of the brain, it is quite evident the accidents of existence preclude a constant normal But the term insanity, to the popular mind implies the state of personal irresponsibility and the question in regard to a particular act, is the proof of the existence of this state The law, with reference to a specific act, simply demands, Was he sane or was he not? implying by the question either a fracture of mental integrity or a degree of derangement beyond which responsibility justly ceases

It is quite clear that from a practical standpoint, we can not hold to the position that all men are insane or that all abnormal states of the mind are degrees of insanity, though leading to it Just as we do not recognize tuberculosis until the bacillus is in the field, so we may have an essential characteristic of insanity That essential of insanity is a delusion uninfluenced by evidence sufficient to refute and due to disease of the brain. This definition includes a much wider range than asylum wards and embraces a class to whom we might hesitate to impute the charge, while it drops others into the still wider circle of cranks and crippled creatures. But to maintain that a man is not really a lunatic unless he holds a delusion will depend upon what we regard a delusion to be. An insane delusion is a false concept—an idea which is the product of defective data and defective reasoning and held in spite of the presentation of a corrected data and corrected reasoning. This distinguishes it from a common delusion—an error of belief remediable by suitably put evidence.

A common or simple delusion is due more to educational *errors*, but which by *necessity*—from the aberrant nature of errors—they more or less induce material conditions off the normal line, and thus, in addition to the direct evil of their falsity, they indirectly conduce to undermine the physical tone requisite for perfectly free mental action. But the lesser degree of defect may be in the course of the evolution, of the greater, yet so common is it that few of us could plead freedom from a finding of some sort.

Insanity has no direct relationship to the size or shape of the brain, but only to its lack of tone or integrity—a molecular disintegration—which in its last analysis is the registration of conduct and which ought to be in line with a motive consistent with common sense—the normal product of common experience. *A simple error of belief*, a mere notion or faint suspicion, may so mislead as to react injuriously before correction is made, or they may even become the substructure of a slowly constructed system of beliefs having a degree of plausibility which may earn for its advocate a respectful attention. As one error held begets another, and as all errors, when actuating, mislead in conduct which determines the tone of the organs of mind, it is evident the result of the one becomes a cause of the other, and thus we may have insidiously developed a fixed delusion or systematized set as in a Swedenborg or a Schweinfurth. If the tone of the brain is fully at par, the action of the mind will be accurate as far as attention is directed both as regards the nature, number and order of perceptions or sensations and the process of reasoning on their relationship and thus correct conception result. It will be the truth, if not the whole truth. A greater brain and one more perfectly proportioned would supply the energy, other things being equal, for more extended attention, and thereby a more comprehensive result.

Systematic observations in prison and asylum practice in New York city abundantly satisfied me that neither mere shape nor size of brain had any thing to do with insanity or criminality. But it was evident that the causative conditions of shape and size did have to do with capacities or talents which, did they not meet a fitting environment, would at least negatively contribute to loss of brain tone from the simple lack of proportional exercise, and in this way lead to demoralization, which, of course, always induces disease or a receptivity for it in some degree.

The delusions of illusion and hallucination differ from the purely relational—those wholly due to ideational incompetence—only in being less centric in origin. They are more fleeting and susceptible of correction, but they may be just as strongly actuating while present. Every delusion is an immediate product of defective ideation—the intellectual act involving perception, reason and will and expressing a failure of the brain. When illusion and hallucination are absent, the delusion is purely the product of ideational incoherence—an incompetent relationship of the ideas involved. The faculties are subjective and the emotions are irregular and either excessive or greatly reduced, with egotism, suspicion, jealousy or fear made manifest. These states are always symptomatic of cerebral instability and although so common, they can not exist in the perfect individual who necessarily has a clear conscience and correct appreciation of facts within the range of his vision, which is serene at all times. Their combination and form of associated delusion are formed by the elements in the history of the individual. Great depression or great excitement can not exist without delusion, for the mental condition is such that ideas can not be correctly associated and thus, if the stage of confusion is transcended, some insane delusions arise, although they may only be fleeting. If correct facts in correct form or relationship were present in consciousness, such morbid manifestations could not exist any more than fire can without fuel. Egotism, jealousy, suspicion, hatred, envy, anger and fear are all expressions of morbid condition or weakness, though we regard them in moderation as perfectly natural. They are due to imperfect comprehension of facts before the mind and which is a measure of lost energy. In delusion, the faculty of attention is so weakened that the presentation of the truth is not appreciated.

The emotions are the product of subconscious ideational activity, made conscious in the form of feeling instead of image, and their precise disposition will accord with the data of the memory—the purely conservative faculty—but only those data which are in affinity with the exciting agent. Emotion is inversely proportionate to intellectual range and is the expression of the inability of the intellect to take distinct and immediate cognizance of all the ideas in the memory aroused by the excitant, just as it fails to distinctly perceive all sensory impressions from the outside. This is a normal condition, but is very often out of proportion long before derangement to the degree of insanity is reached.

By the free normal action of the mind, I do not mean an everyday type of health, but a much higher. To be on a level with a certain class or race of humanity, may be a long way below the highest possibilities of individual capacity. Indicative of this fact is the common lack of quickness, preciseness and completeness of mental action within the range of individual knowledge and capacity. Our criterion should be formed from ultimate motives for existence. Insanity is not a relative term, but a positive. It is an extreme aberration from the normal, and the normal is only normal in so far as it is in correct line with evolution or final purpose in nature and not simply in harmony with immediate social environment.

An insane delusion has three components, error of fact, incapacity for correction, error of inference and illogical tenacity. The responsible faculty for this is the attention which is so affected by a weakened will that it can not be held long enough to complete perception and conception, and ideational displacement results But as the will is the dominant power of the mind and owes its strength to support from the other faculties, it is evident that its weakness is due to a general loss of energy, which subserves the mind as a whole, and as a consequence thus becomes an added cause for farther evil

The evidence of a delusion is not always readily recognized, even by asylum physicians Some subjects secrete their delusions, some have their delusions instantly dissipated by the presence of a physician, officer or stranger, some only have momentary delusions or perhaps frequently changed, some change with prominent events, some have delusions so buried that they can only be elicited by particular conditions and requiring the analytical skill of an expert

But the point of present issue is that where there is no delusion, there is no insanity, for the mind that is competent to comprehend facts and their bearings within the scope of its education and the limits of ordinary surroundings is a mind capable of correction on any error, and, conversely, a mind that is not thus competent must of necessity beget delusion of one form or another which it is as incompetent to discharge, no matter what the evidence combating

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FURTHER REPORT OF THE SERUMTHERAPY IN TUBERCULOSIS

BY PAUL PAQUIN, M D

PHYSICIAN IN CHIEF ST LOUIS SANITARIUM FOR THROAT AND LUNG DISEASES

ST LOUIS, MO

Up to this date all of the reports which I have had the honor to make to the medical profession, bearing on the use of the horse-blood serum in the treatment of tuberculosis, cover a number of cases in which the improvement had been more or less marked Our experiments up to the last report had not gone far enough to justify the statement that we had, in fact, cases of tuberculosis which had been cured The present writing is chiefly for the purpose of reporting results of a more positive nature and, at the same time, to say a few words on the complications that may arise during serum injections, the conditions which militate against its use, also the extent, so far as I am able to present from past experience, of the expectations that may be based on the new treatment I will begin with the latter propositions

In the first place, one should always bear in mind that tuberculosis varies a great deal with individuals and with respect to the organs affected Pulmonary tuberculosis itself presents a wide range of pathologic conditions that must be judged and interpreted according to the extent and nature of each, locally and generally on the system Consequently, no two cases of pulmonary consumption can, with safety, and hope of success, be treated alike by any one remedy, irrespective of the general and local constitutional or organ disturbances One would suppose that a specific treatment should apply to all forms of it. One would think that if creasote is good in one case it ought to be in another If inhalation of essential oils does good in one case it should benefit in another If serum injections produce good results in a given case, they should have similar effects, irrespective of any other treatment, in any case, affecting any organ

But such is not the case It is unfortunate that so many seem to think that with a given specific remedy for any given disease, all that is necessary is to apply that remedy mechanically, without respect to anything else, physiologic or pathologic Chronic tuberculosis of the lungs may consist of scattered tubercles throughout one or both lungs (and hundreds of them), each surrounded by a special envelope, impenetrable by the circulation or by medicines These tubercles may be surrounded by acute inflammatory processes or free from them Some may be in an advanced stage and others just forming In such cases, the opening of the tubercles happens gradually and successively, that is, some of them break to day and others to-morrow or later on Consequently, a more or less constant process of eruption goes on for months or years Sometimes eventually, cavities are formed, during which certain principles of the morbid matter are partly absorbed, but mostly expelled by expectoration It is evident that no form of treatment can arrest these slow cases promptly The good results of serumtherapy in these have been slow in proportion to the nature of the affection, but have occurred, and we have under observation patients of this class who are unquestionably steadily improving, if we are to judge by the disappearance of the chief symptoms, such as night sweats, fever, loss of appetite, emaciation Indeed, to arrest the progress of the disease in such cases is itself progress toward a cure In another form of tuberculosis, one may meet with contracted lungs, sometimes with alterations of a more or less fibrous character, lungs encased usually in a narrow or otherwise defective chest These cases are also very slow (they do not always end with cavities), and serumtherapy as well as other agents must naturally fail to bring quick improvement

It is only slowly that one can reach such pathologic lesions, whatever agent is used

On the other hand, we find chronic cases of tuberculous processes existing here and there, or localized in one apex or both apices, which are of a subacute character, and around which there exists more or less infiltration which, under physical examination, simulate to some degree the fibrous consolidations which I have mentioned before This form of tuberculosis yields more readily to the serumtherapy than those above mentioned

Again, there are cases of chronic tuberculosis of the lungs in which the tuberculous alterations consist first in localized inflammatory processes, unknown sometimes to the individual until a hemorrhage takes place and which sometimes end in cavities more or less extensive, and more or less serious according to their location, etc One occasionally meets with such cases without detecting any other alterations in the lungs

It must be apparent to any physician that the various conditions just mentioned (which do not by any means cover all the types of pulmonary phthisis) are not to be treated by any stereotyped formula and serotherapy, acting as a specific agent, should not be depended upon exclusively, irrespective of other conditions in the diseased organization In other words, every case should be managed scientifically, using the serum only for the purpose it is intended, namely, to give to the organism the physiologic elements which it lacks to fight the tuberculous process from within

Most of the chronic forms are mixed infections, and therefore demand additional treatment, and were they not such, accessory therapy is certainly in order to meet any special condition, and physicians should not neglect them under any circumstances In our first reports we made it a point to explain that all our experimental cases had been treated exclusively with serum Exclusive serumtherapy was necessary in those experiments, because we had to demonstrate as far as possible what the serum alone could do, but we are not justified in this early stage of the serumtherapy to lay aside everything else that may be useful to meet any special phase of disorders in a tuberculous individual In fact, it is unscientific to treat diseases by any stereotyped method Each case of any given disease should be considered on its merits if I may so speak, and after proper consideration one should use the most potent or most specific therapy and add to it, if necessary, according to what the symptoms may suggest

We have beside to deal with acute forms of tuberculosis which, under ordinary treatment, may be classed as hopeless from the very beginning It may be said that they always end in death Medicine of the past shows no autnentic records of cures in any such case It is in these, however, that serumtherapy has proved its efficacy most strikingly It is only within the last three months that we have had opportunities of testing the serum in this form of the disease and, already, I am in position to point to three patients in which the diagnosis made microscopically and physically was unmistakable, who have arisen from a bed of sickness where everything pointed to death within a short time These cases, were not in my own practice, and, consequently, I am not at liberty at present to give their history But I will mention that I have seen two of them, and that I have verified the microscopic analyses previously made in them and know that both of them had acute tuberculosis of the lungs in the worst form and both are now entirely free from bacilli, and are up and about and gaining strength, and one has absolutely no physical or microscopic sign of the disease left This one, a young lady of about 18 years, had been at the time of the beginning of the treatment, prostrated in bed some four or five weeks, had had a temperature of 104 to 105 during three weeks preceding the injections, had had cerebral symptoms to the degree of absolute loss of mind during all that time, had both lungs so seriously involved that breathing was painfully short and laborious, emaciation and weakness were so pronounced that she was absolutely unable to raise her head, and could barely lift her hand She was treated about three weeks with the serum and the temperature went down steadily after about four days from 105 to 98 5, the lungs gradually but steadily cleared up, hemoptysis and expectoration ceased, the bacilli entirely disappeared, the clouds were lifted from the mind, the appetite returned and the young lady is out of bed, up and around, and putting on flesh rapidly This is the most striking result we have obtained by the *exclusive* use of the serum The physician in charge, who will report the case himself shortly, excluded all other medicines because the case, after consultation with other physicians, was considered hopeless by any of the old modes of therapy The serum was used as the last resort without any hope whatever

The other patient of the two just mentioned, whom I have seen, was an old gentleman who had also been prostrated in bed several weeks with acute tuberculosis diagnosed as such by some of the most eminent physicians of St Louis, who, after consultation, considered his case hopeless This patient began the serumtherapy under another physician, and within six weeks, I believe, was also raised from his bed and is out and about Not a bacillus is to be found in his expectoration to-day, one lung is entirely cleared, but in the other there remain some adhesions, which will probably remain, as they seem to be of a fibrous character Certainly the tuberculous phenomena seem to have been arrested, the germs are there no more, and the ravages which they have produced are being healed[1] We have also two cases of chronic tuberculosis without any more symptoms of the disease except the evidence of the cicatrix They were both bedridden and are now both working hard every day

Now as to the complications that may arise in acute tuberculosis by injections of serum, I will mention first the general disturbances Constant injections of serum may result in rheumatic symptoms, particularly in those with rheumatic diathesis Swelling and pain of the articulations and pain in the muscles may arise By suspending injections and using lithia the symptoms disappear Occasionally urticaria results, scattered over the skin around the ankles, body, neck, etc A curious accident that occurs sometimes is a sudden disturbance of the circulation, evidenced by a very pronounced flushing of the face, a condition which usually promptly disappears This occurs during injections or just after The face becomes gorged with blood, the patient feels dizzy and will fall if not assisted to lie down These symptoms appear and disappear within two to five minutes, in my experience Two or three times, after such occurrences, there resulted a chill and occasionally a headache, and pain appeared in the spinal column In no instance, except one, did the heart suffer during the trouble In this case it became very feeble and hypodermic injections of stimulants (whisky and nitro glycerin) were deemed useful to assist recuperation This disturbance of the circulation occurred in my practice and my experiments eight times in a total of some eight thousand injections Whether it can be fatal or not, I am unable to say, but it is so rare that it is not to be considered in any worse light than any untoward symptom that may arise from the administering of any other medicine of a potent character which we use daily in medical practice, such as cocain, sulfonal and numerous other medicinal agents which the readers will readily recall to memory

With respect to the kidney's action, I have to mention that in two cases in which there existed already a trace of albumin, albuminuria increased without, however, producing any of the serious symptoms that we note in Bright's disease In neither of these cases were there any casts to be found In another case, which was not directly under my control, and which unfortunately had not been analyzed before beginning the injections, albumin was found in great quantities after the patient had been treated two or three weeks I am unable to say whether this came from the injections or not, inasmuch as it occurs frequently enough, that albuminuria exists with tuberculosis On this point, I will mention that, being in the habit of analyzing the urine of every case of tuberculosis before treatment, I have found the last four months, six cases of albuminuria in thirty-two cases of pulmonary consumption

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[1] This old gentleman patient now weighs nearly 200 pounds Weight at beginning of treatment less than 160

From the foregoing, I judge that it is not wise to use the serum in cases where there is kidney inactivity Locally, the serum injections may produce erythema and local irritations more or less pronounced These are sometimes sufficient to produce an elevation of temperature and they should be treated according to their nature It would seem from the foregoing, that serum injections in tuberculosis, or in any other disease for that matter, should not be considered entirely free from possible complications, and that every case treated should first be thoroughly analyzed and treated on its merits With respect to the results of the serum in the hands of others, I am pleased to say that I am getting daily excellent reports which will serve materially in deciphering the conditions in which the serum will or will not act beneficially or will be too slow for practical purposes I have now in my hands, reports covering the use of the serum in various parts of the country in many different tuberculous conditions from which I shall glean material for an article explaining various kinds of results All these, I can now state conscientiously, give evidence that the principle of serotherapy in consumption is correctly interpreted in our experiments and our judgment as made known by our reports In New Orleans, California, Missouri, Illinois, etc , we have had excellent results, and, naturally a percentage of failures

Before closing, I wish to state that in local tuberculosis of the skin, glands, and surgical cases with fistulæ, with and without operations, the results have been positively beneficial Specific reports will be given by the physicians who have undertaken such cases in this city and elsewhere Cures have practically occurred

In conclusion, I beg to warn the over-anxious against the idea that a few weeks of treatment of any case of chronic tuberculosis will effect a cure The cases we can now report as free from tuberculous symptoms and which were in the first and second stages of the disease have been treated not less than four to six months steadily Four to ten months of steady treatment should be contemplated from the onset No miraculous or magic effects should be expected by any doctor or patient Considering that tuberculosis is fatal in 99 per cent of cases, and generally very slow, this conclusion is entirely reasonable

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SOCIETY PROCEEDINGS

American Public Health Association.

Proceedings of the Twenty-Third Annual Meeting held in Denver, Colo , Oct 1-4, 1895

SECOND DAY—WEDNESDAY, OCTOBER 2

(Continued from p 632)

The Association reconvened at 10 o'clock, A M, in the Brown Palace Hotel, with PRESIDENT BAILEY presiding

There was a larger attendance than during the preceding day's sessions, as a number of delegates had arrived since last adjournment

CHAIRMAN SEWALL, of the Local Committee of Arrangements made announcements regarding various trips, excursion rates to same, social functions, etc

The Executive Committee, through Secretary Watson, recommended that the names of the applicants in his hands be elected to membership Upon motion duly seconded th Secretary cast the ballot of the Association for them

The Committee also recommended the adoption of th resolutions offered at Tuesday morning's session by Dr Mitchell, regarding the transmission through the mails o bacteriologic specimens when properly prepared so that n danger could possibly accrue to those handling the packages etc Dr Mitchell then exhibited two samples of tubes and cases that he had devised for this purpose which he had proved was perfectly safe to send specimens in, and deemed to be absolutely safe to admit through the mails

The resolutions were then unanimously adopted The committee also recommended that the committee on the centennial celebration of the discovery of vaccination be restored by the Association Adopted

The committee recommended the creation of a new committee, namely, a Committee on Forestry and its Relation to Public Health Adopted

After some additional routine business had been disposed of, Treasurer Henry D Holton, of Brattleboro, Vt , submitted his annual report which showed receipts from September, 1894, to date from all sources to be $3,627, and disbursements as per fourteen vouchers , that there is remaining in the treasury $493 98, *Index* fund unexpended Upon motion, the report was received and referred to an auditing committee consisting of Mr Crosby Gray, Dr H B Horlbeck, and Dr J N McCormack

DR C N HEWITT introduced the following resolution on the death of M Louis Pasteur, which was duly seconded

Resolved, That this Association has heard with profound sorrow of the death of Louis Pasteur That it offers to his family, to his assistants at the Institute Pasteur, to his country, to the members of the profession, sincere condolence in the loss of a master of science His work for the alleviation of human suffering is as he would have chosen—his everlasting monument His example as an humble and attentive servant and student of nature, is the precious legacy he has left us

On motion of Dr McCormack, a silent rising vote was taken In addition to the foregoing, upon motion of Dr Formento, a cablegram was sent to Dr Roux, collaborateur to Pasteur, containing these words "The American Public Health Association mourns the loss of Pasteur"

The roll of the Advisory Council was called, and the following members were present

Colorado—Dr Henry Sewall, Denver
Connecticut—Dr R S Goodwin, Thomaston
Delaware—W C R Calquohoven, Wilmington
Illinois—Dr Liston H Montgomery, Chicago
Indiana—Dr L S Whitesides, Franklin
Iowa—Dr A W Cantwell, Davenport
Kansas, Dr Daniel C Jones
Kentucky—Dr J N McCormack, Bowling Green
Louisiana—Dr Felix Formento, New Orleans
Maine—Dr A G Young, Augusta
Maryland—Dr James F McShane Baltimore
Massachusetts—Dr S H Durgin, Boston
Michigan—Dr Cressy L Wilbur, Lansing
Minnesota—Dr C N Hewitt, Minneapolis
New Hampshire—Dr Granite P Conn, Concord
New Jersey—Dr Henry Mitchell, Asbury Park
New Mexico—Dr S D Swope, Deming
New York—Dr A W Suiter, Herkimer
North Carolina—Dr R H Lewis, Raleigh
North Dakota—Dr John Montgomery
Ohio—Dr Charles O Probst, Columbus
Pennsylvania—Crosby Gray, Pittsburg
Rhode Island—Dr Gardner T Swartz, Providence
South Carolina—Dr H B Horlbeck, Charleston
Tennessee—Dr W C Bailey, Knoxville
Vermont—Dr H D Holton, Brattleboro
Wisconsin—Dr U O B Wingate, Milwaukee
District of Columbia—Dr Ralph Walsh, Washington
U S Army—Deputy Surgeon-General A H Woodhull, Denver, Colo
U S M -H Service—Surgeon P H Bailhache, New York
U S Navy—Surgeon Bates, New York
Dominion of Canada—Dr F Montizambert, Quebec
Province of Ontario—Dr Peter H Bryce, Toronto
Province of Quebec—Dr E P La Chapelle, Montreal
Manitoba—Dr James Patterson, Winnipeg
New Brunswick—Dr George E Coulthard, Fredericton

The appointment of Mexican members to the Council was deferred until the arrival of the delegates from the Republic

DR H B HORLBECK, Health Officer of Charleston, S C , read the first paper which was a brief one, entitled "Municipal Steam Disinfection " The author illustrated his remarks by lines and drawings upon blue paper

The succeeding essay was practically upon the same topic, "*Disinfection in American Cities*," by Dr Charles V Chapin, of Providence, R I

Both papers elicited marked attention and contained much valuable information concerning the methods of various cities throughout the United States Dr Horlbeck thinks that Charleston has the best steam disinfecting system in this country The use of steam and a solution of bichlorid of mercury was recommended where contagious diseases were prevalent Dr Chapin's remarks were more extended The statistics he presented were gathered from fifty cities in this country and Canada Only two out of this number disinfect after measles and the other minor contagious diseases These are Rochester and Toledo, and their, systems are very thorough New York, Brooklyn and Philadelphia were mentioned as devoting particular attention to the spread of phthisis In Detroit, Denver and Newark, the favorite method of fumigation is with sulphur St Louis uses steam, and several other cities use mercuric bichlorid

Mr George J Kindel, of Denver, was accorded the privileges of the Association He is a manufacturer of bedding supplies, mattresses, etc , and dumped on the floor a collection of shoddy rags, not very clean in appearance, which he stated in a vigorous manner was a fair sample of the sort of material put into rag mattresses of the cheaper quality He thought it was dangerous and quite likely to breed disease He asked the Association to investigate the manufacture of such bedding, and concluded by saying

"For years I have earnestly endeavored to bring about reform in the manufacturing of bedding In the interest of pure and healthy bedding, I, three years ago, visited the health authorities of the cities of Chicago, St Louis, Cincinnati Buffalo and New York city Also those of Liverpool and London, England

"Near New York city is manufactured to day, a shoddy (rag) comforter that is sold in every city in the United States Shoddy (rag) mattresses are manufactured in every city of 100 000 inhabitants In our beautiful city of Denver, there are two such manufactories, my own, and that of Kent & Stuchfield It is not by choice, but by compulsion that they are made here Chicago, Omaha, Lincoln and Wichita ship them in by the carload, hence we must make them or go out of the bedding business, as in this section four-fifths of the bedding is made of this vile stuff

"In addition to the notice of this subject to the State Board of Health, I have again called the attention of our estemed Board of Health to this subject while a member of the grand jury in April, 1894, when I endeavored to indict myself for making this dangerous bed filling We had these medical officers before us to give expert testimony They differed widely Some went so far as to say that there was nothing unhealthy or dangerous about it Needless to say, the grand jury did nothing, except to make a slight mention in their report to the court about it

"So long as there is no national law governing the subject, just so long will these goods be manufactured and sold under the innocent title of wool bedding Every drygoods and house furnishing goods store have these goods on their counters

"The following extract from a Chicago paper may be read with interest It furnishes a good example of the old truth that an ounce of prevention is better than a pound of cure What precautions have we in the matter of the old rags? None, and it is an enemy tenfold greater to the public than the mails could be

Orient Mail to be Fumigated —*Passengers landed from the Galic after being inspected* —San Francisco Sept 20 —The steamer *Galic*, which arrived this morning from Hong Kong and Yokohama did not stop at Honolulu She brought eleven passengers from Hiogo the worst infected port in the Orient. No sickness was reported on the trip across and no alarm was felt by the ship s officers Since last advices there has been an increase of the cholera plague in the Oriental ports During the two weeks preceding the sailing of the ship there has been 6 deaths from cholera in Hong Kong 51 deaths out of 51 cases at Fagasaki 256 deaths out of 829 cases at Hiogo and 27 cases with 19 deaths at Yokohama. After inspection by members of the Board of Health the passengers and mail was landed, and the steamer returned to quarantine

The postmaster to day received instructions from Washington in response to his suggestion directing him to fumigate all mails received from infected ports

The chief of police to-day ordered a house to house canvass for the purpose of compelling all citizens to put their houses in the best sanitary condition possible

I hope you will take up this matter earnestly, and prevent, at least, one source of contagion

THE MICROSCOPIC DIAGNOSIS OF DIPHTHERIA BY A NEW STAINING METHOD,

was read by Dr H C Crouch, of Denver, member of the *Colorado State Board of Health* The author stated that the diagnosis of diphtheria by the microscopic examination of cover glass preparations from the membrane is admittedly imperfect By the ordinary method, we are obliged to rely upon the occurrence in large numbers, or almost pure cultures of bacilli having certain morphologic peculiarities which, however, are not sufficient to distinguish them from other bacilli found in the mouth, if such are present in any quantity A method which would give a specific stain as with the tubercle bacilli would evidently be of the greatest importance Such a stain has not yet been found Fortunately it is not necessary to have a stain so specific as to detect single diphtheria bacillus, for they are invariably present in a certain quantity, if present at all A method which will detect certain of them with some degree of certainty would be sufficient in most cases, and such a method it seems to me I have found, at least if used with the proper precautions and with sufficient skill I believe from my experience with a large number of cases that this method will suffice to determine the diagnosis in a very large percentage of cases

In conclusion, he said, that the diphtheria bacillus as seen in preparations from cultures consist of bacilli of varying sizes, the larger ones particularly presenting characteristic features in the way of club shaped ends and irregular staining, but all forms showing a tendency to the alteration of deeply and lightly stained portions In addition to this, and distinct from it, are certain round or oval bodies which may be made apparent by certain methods, the existence of which was brought to our attention by Babes, Neitser, and Ernst The method pursued by the latter was to stain strongly with hot methylene blue, and follow this with bismarck brown These bodies would be blue, the rest of the bacillus being brown I have been investigating the feasibility of employing this peculiarity of the diphtheria bacillus to differentiate it from other bacilli found in the mouth, and with a degree of success beyond expectation I found, likewise simpler methods of staining, and peculiarities which I believed have escaped attention hitherto If a fresh serum culture is stained momentarily with a 1 per cent solution of methyl green, it is often possible to bring out these bodies without further treatment Treated thus they have the peculiarity of reddish granules in a faintly green bacillus, usually one at each end By staining with methyl green more strongly and following with methylene blue, bacilli with red dots resembling spores will be seen These bodies have apparently a peculiar affinity for methyl green, with which they enter into a chemic combination resulting in change of color from green to red He had consequently employed methyl green for their detection By adding other colors, the penetration of the methyl green may be increased, and a double stain obtained immediately I found dahlia most useful, employed in the following proportions 1 part of 1 per cent, dahlia water, 5 parts 1 per cent methyl green, and 4 parts water If either color predominates in the stain too decidedly, the other color is cautiously added until the desired result is tested on the bacilli from which a culture is obtained The stain works instantaneously, and if too deep the effect is not obtained In such a case, the cover glass may be treated quickly with bismarck brown, which replaces the dahlia in the body of the bacillus, leaving the bodies described standing out in contrast I have tested this method on a large number of cases during the last six or eight months and have never failed to find the result of the culture positive where I found these forms present in the cover-glass examination In one case where I had diagnosed diphtheria, the first culture was unsuccessful, but the second culture which I had taken, confirmed the diagnosis, which fact it seemed to me, indicated that the direct examination should always have its place in addition to the culture These bodies I do not consider to have any connection with spores in spite of their superficial resemblance They are found in the greatest numbers in young freshly growing cultures and are much less abundant in older cultures They may be readily detected in cultures only a few hours old, and thus made use of to confirm a diagnosis earlier than the full development of the culture That they are not degenerative forms is evident from the same considerations I am inclined to attribute a nuclear nature to them, and propose the name *nucleoid* bodies They are evidently connected with the active growth, and are absent in the resting forms, suggesting thus the resemblance with indirect cell division Being particularly abundant during the earlier and more rapid growth, they are readily found in the earlier stages of the disease, and from the ease with which they may be brought out, they acquire a very great practical importance in the microscopic diagnosis of diphtheria

In the discussion that followed, by Drs Mitchell and Kinyoun, the latter gentleman said among other things, "that all methods are a question of doubt in diagnosis" Other members who discussed the paper and viewed the slides under the microscope were Drs Swartz Chapin, Wright, Shrader, Guilbert, Leal and Montgomery

At 11 45 o'clock the Association adjourned until 2 30 P M

Second Day—Afternoon Session

The Association convened at 2 30 P M with the President in the chair

The first paper announced to be read was by Dr Edward Jackson, of Colorado Springs on

SUGGESTIONS AS TO OCULAR HYGIENE IN THE SCHOOLS

Among other statements, the author said, all schemes for the improvement of the ocular conditions of school rooms failed more or less to take into consideration the necessity of teaching children how to use their eyes The child is not taught to use his eyes, nor is he taught how to avoid eye strain To accomplish this it is necessary to teach the teachers a few things which they usually do not know Much of the work done has been merely in showing the defects existing without showing any remedies Even if it were usual to have examinations made of the eyes of the children, this would not be sufficient If the teachers do not themselves understand the eye they can not teach its proper use The eye itself is not a sufficient monitor, as indicated when eyes are habitually used after they are tired The matter of fair limits of study, and the lighting of rooms should be given careful consideration in every instance The more light the better, so long as the light is not blinding The point of determination should be the darkest part of the room By an arrangement for diffusing and mellowing the brilliant rays, and throwing them into the darker corners, the room can be made satisfactory The relation of floor space to window space does not by any means furnish the proper standard for determining the proper amount of light The conclusions arrived at were

1 The child should be trained in the use of its eyes

2 The supervision of the work in the school room as to the way in which children use their eyes should be constant

3 More care is needed in lighting school rooms

In the discussion, Dr R H Lewis of Raleigh, N C, said one trouble was, that the child was permitted to stoop over his desk He called attention also to the great improvement which the system of vertical writing affords over the old slanting system, which made it impossible for a child to assume a wrong attitude at the desk

Dr James Madison Watson, of Elizabeth, N J, said--the question under consideration is of the utmost importance, and he hoped that there would be some practicable suggestions for future work He emphasized the fact that Nature must be aided in this, as in all things A man walking on a street in a city, gradually learned to see many things at once without appearing to see anything The child must be trained to see many things at once, but not too many Most people see too much, consequently they use the eye too much

Dr H D Holton, spoke of the trouble and danger arising from constantly changing the focus of the eye of the child in school, looking from the blackboard to the book, and back again frequently School directors should investigate this matter and provide against such a danger to children's eyes Distant focus and near focus should be more intermediate when a child has to study simultaneously its book and a blackboard

Dr A G Young stated, that it was more trying to read from the blackboard than from the book, because the range of vision was usually less, the figures were not so plain and the light was often bad He thought there should be great care exercised in this matter

Dr S H Durgin inquired of the essayist, if there had been any examination made by an oculist of the children's eyes He thought there should be an inspection of children in all schools to ascertain their ocular powers, as there is great variety of vision and the same requirements should not be made upon all alike Teachers should learn the peculiar characteristics of each child and always consider them

Dr H M Bracken of Minneapolis, Minn, considered that teachers should be taught enough to discover faults in the eyes of pupils and know which ones should be sent to an oculist for closer examination

Dr James A. Stewart of Baltimore, Md, inquired if a blue board would not be better than a black board—he thought perhaps, black boards are oftentimes too shiny

Dr Jackson closed this interesting discussion He mentioned several methods for teaching children to see quickly and accurately He stated the fact that the illumination should be centered upon the thing looked at and as little as possible upon other things It is very difficult to see figures on a black board because of the polished surface Black board work is also hard on the eyes because of the uncertain amount of reflection of outside light He had purposely kept the number of points in his paper down to the minimum, thinking it would prove more interesting to do so As for the examination of children, he thought it an anomaly that they were questioned so closely concerning their former studies and so little concerning their physical powers, their ability to see, hear, and feel He would not underestimate the advantages of having physical investigation of individual children, for he thought this quite necessary, if not more so than to look after the conditions of all children He thought it was a mistake which surely only needed to be brought to the attention of school directors The system in vogue in examining the eyes of railway employes might be introduced in the schools with good effects Regarding the color of the board he thinks this is of less importance than the reflection of the board If a board, dead black, with no gloss, is secured, it will not injure the eyes

The second paper of the afternoon, was

ON THE OUTLOOK FOR A GENERAL SYSTEM OF REGISTRATION OF VITAL STATISTICS IN THE UNITED STATES,

presented by Dr Cressy L Wilbur, division of vital statistics, State department, Lansing, Mich The Doctor began by quoting a prophecy made at the first meeting of the Association twenty years ago by Dr Elisha Harris, who thought at that time that the United States would have a perfect inter State system of vital statistics before the end of this century He took up the points and showed why it was that this prophetic vision had not been realized, and continued by stating that the dependence of accurate registration of vital statistics upon a certain degree of density of population, was illustrated by the experience of this country and Europe Limits of density of population were suggested below the minor of which accurate registration is practically impossible, and above the major of which such registration naturally goes into effect as an indispensable adjunct of social organization The condition of the United States as a whole was considered with reference to such limits, and the conclusion reached that the advent of a general system of registration for this country is much more remote than many vital statisticians have supposed A review of the actual results of State registration in all the States of this country having systems of registration, good, bad and indifferent, was presented for the past fifteen years by means of a table of registered death rates and a diagram The favorable and unfavorable facts bearing upon general registration were noted, and suggestions made whereby a fairly representative, though partial, return of mortality from a large part of the United States may be obtained until the general advance in populousness will admit of general registration Among these means are 1, the promotion of municipal registration, and a fuller utilization of the results of such registration, 2, supporting the work of the United States Weather Bureau of the Department of Agriculture, in its studies of sanitary climatology recently undertaken, 3, extension of the methods employed by Dr Billings in the compilation and study of the mortality statistics of the eleventh census together with the establishment of a permanent division of vital statistics as an important part of any proposed permanent census organization, 4, prevention of retrograde action on the part of any States sufficiently advanced in wealth and populousness to support accurate systems of registration It was further urged that the attention of the boards of commissioners appointed by many States for the purpose of securing greater uniformity of statute laws, be called to the importance of uniform legislation relating to the registration of births and deaths

There was no discussion on this paper

Dr Charles Denison introduced a series of resolutions favoring the creation of a National Department of Health, with special reference toward prohibiting the immigration to this country of diseased and otherwise unfit persons, also with power to guard against the introduction of contagious and infectious diseases, which were, under the rules, referred to the Executive Committee

Dr Henry D Holton moved, duly seconded, that when the Association adjourns on Friday, it does so to reconvene at Colorado Springs on Monday morning, the 7th inst, at 10 o'clock, for a short session The motion prevailed

The President announced the following gentlemen to constitute the Special Committee in reference to the "International Pollution of Waters Problem," as suggested during the forenoon of Tuesday's session Dr P H Bryce, Rudolph Hering, Dr C O Probst

The report of the Auditing Committee upon the Treasurer's annual report was next heard The report stated that all vouchers for disbursements of funds, and the entire report of the Treasurer was found correct The report was adopted

Dr Wilbur submitted the following resolutions, which were referred to the Executive Committee

Resolved, That the American Public Health Association cordially commends the action of the Weather Bureau of the United States Department of Agriculture in undertaking the collection of data relating to sanitary climatology

Resolved, That the American Public Health Association indorses the method first employed in the last United States census, of studying the vital statistics of certain American cities, as registered by local authority, for a series of years, and recommends that such method of treating vital statistics be carried out, so far as may be practicable, by the twelfth United States census for each year of the present decade Inasmuch as the collection of accurate vital data implies continuous, and not intermittent, action on the part of the central registration authority, it is obvious that a permanent division of vital statistics as a part of a permanent census bureau, is essential to the proper conduct of this important branch of the decennial census

Resolved, That a committee be appointed to prepare a draft of a registration law (or to formulate the principles to which a registration law should conform) suitable for adoption by States not having at present an accurate system of registration of births and deaths

Resolved, That a committee of the American Public Health Association be appointed to present to the boards of commissioners appointed by certain States to promote greater uniformity of statute laws, the importance of uniformity in the methods of registration of births and deaths in the several States of the Union

The Association then adjourned until 10 o'clock A M, Thursday

THIRD DAY—THURSDAY, OCTOBER 8

The Association did not convene until 11 o'clock owing to the protracted session of the Advisory Council, which held nearly a two hours' meeting during the forenoon President Bailey presided The first announcement was a report from the Executive Committee on the resolutions offered by Dr Wilbur during the preceding afternoon The Committee recommended that the resolutions be submitted to the Committee on Nomenclature of Diseases and Forms of Statistics, which upon motion duly seconded was so ordered After a number of announcements by the chairman of the Local Committee of Arrangements, the first paper announced on the program was on

NATIONAL LEGISLATION FOR THE CARE OF THE PUBLIC HEALTH, by Dr Wm P Munn, *Commissioner* of Health, Denver Colo, in which he said the failure of Congress to support the National Board of Health which ended its existence some ten or twelve years ago has been a source of deep regret to working sanitarians of the whole country It seems to be an axiom with our national legislators that cattle and hogs are of infinitely more importance than are human beings There are, therefore, in existence in this country half a dozen kinds of institutions whose existence depends upon the amount of noise they make about the investigation of diseases of the great American Hog and other animals whose welfare is of much importance from a monetary standpoint, to the agricultural classes The medical profession has for a number of years been asking Congress, with little apparent prospect of success, to establish a Department of Public Health, which shall give to the interests of human beings at least as much attention as has been bestowed in the past upon farm animals Congress has practically told the medical profession that the interests of human beings are not of sufficient importance to demand national legislation for their protection It is apparently futile to demand of Congress a recognition which it is so loath to give For this reason I have thought of making a proposal of a different nature, which it is hoped will not arouse antagonism, and being based upon the same general plan as that which has been so uniformly successful in securing recognition for the agricultural element of our nation, will at the same time appeal to the selfish interests of the various Congressmen in making an appropriation for expenditure by the various State authorities and to this extent strengthening certain already existing State institutions, without the State itself being forced into any further expenditure for the purpose Briefly, the proposition is this to establish in each State and Territory in connection with each State Board of Health now established, or which may hereafter be established a State Laboratory of Hygiene which shall be supported by an annual appropriation from the National Congress The plan is formulated upon the same basis as that upon which was established the agricultural experiment stations in connection with the various agricultural colleges in each State These experiment stations have been an unqualified success in many of the States, and have been instrumental in arousing an enthusiasm among scientific agriculturists and promoting sensible experimentation among farmers It is hoped that a similar beneficial influence would be exerted by the establishment in each State of a Laboratory of Hygiene in connection with the State Board of Health In States where no State Board exists, the fact that the Congressional appropriation might be available would be a sensible stimulus to the enactment of statutes creating a State Board State Boards having the usual dribbling allowance that is made for their support by the average Legislature, because the doctors composing their membership are not politicians of sufficient influence to secure proper recognition, would be placed upon a firm financial footing and made capable of doing their proper work and wielding their proper influence in their respective communities The many advantages that would accrue to sanitary science from the coöperation of forty or more laboratories, working by coördinate methods upon similar problems can not be more than hinted at The vast improvement which would follow in the sanitation of all local communities in the natural course of events should succeed to the positions of local health officers now only too often held by pot-house politicians, would result in an incalculable saving of human lives

I submit the proposed bill without further comment

An Act to establish Laboratories of Hygiene in connection with State Boards of Health existing by law in the several States

SECTION 1—Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in order to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with public health and to promote scientific investigation and experiment respecting the principles and applications of hygienic science, there shall be established under the direction of the State Boards of Health in each State or Territory established, or which may hereafter be established, a department to be known and designated as a "Laboratory of Hygiene"

SEC 2—That it shall be the object and duty of said Laboratories of Hygiene to conduct original researches or verify experiments upon the diseases to which human beings are subject, and methods of prevention of the same, the chemic composition of human and animal substances of various kinds, the production within the animal organism of toxins and antitoxins, the comparative advantage to human beings of residence in certain localities and under certain climatic and meteorologic conditions, the effect upon the health of human beings of varying conditions of soil atmosphere, altitude, occupation, food, drink, clothing and dwelling places, the scientific and economic questions involved in the study of disease and disease prevention and such other researches and experiments bearing upon the health of human beings as may in each case be deemed advisable having due regard to the varying conditions and needs of the respective States and Territories

SEC 3—That in order to secure as far as practicable, uniformity of methods and results in the work of said laboratories, it shall be the duty of the Supervising Surgeon General of the Marine-Hospital Service to furnish forms, as far as practicable, for the tabulation of the results of investigation or experiments, to indicate from time to time such lines of inquiry as to him shall seem most important, and in general, to furnish such advice and assistance as will best promote the purpose of this act It shall be the duty of each of said laboratories annually, on or before the first day of February, to make to the Governor of the State or Territory in which it is located, a full and detailed report of its operations, including a report of its receipts and expenditures, a copy of which report shall be sent to each of said laboratories, to the said Supervising Surgeon-General of the Marine-Hospital Service and to the Secretary of the Treasury of the United States

SEC 4—That bulletins or reports of progress shall be published at said laboratories at least once every six months, one copy of which shall be sent to each newspaper in the States or Territories in which they are respectively located, and to all public health officers and to such other persons actually interested in matters of public health as may request the same so far as the means of the laboratories will permit Such bulletins or reports and the annual reports of said laboratories shall be transmitted in the mails of the United States free of charge for postage, under such regulations as the Postmaster General may from time to time prescribe

SEC 5—That for the purpose of paying the necessary expenses of conducting investigations and experiments, and printing and distributing the results, as hereinbefore prescribed, the sum of $15,000 per annum is hereby appropriated to each State, to be especially provided for by Congress in the appropriation from year to year out of money in the Treasury, to be paid in equal quarterly installments, on the first day of January, April, July and October of each year, to the treasurer or other officer duly appointed by each of said State Boards of Health, to receive the same, the first payment to be made on the first day of October, 1897, Provided, however, that out of the first annual appropriation so received by any laboratory, an amount not exceeding one-fifth may be expended in the erection, enlargement or repair of a building or buildings necessary for carrying on the work of said laboratory, and thereafter an amount not exceeding 5 per centum of such annual appropriation may be so expended

SEC 6—That whenever it shall appear to the Secretary of the Treasury, from the annual statement of receipts and expenditures of any of said laboratories, that a portion of the preceding annual appropriation remains unexpended, such amount shall be deducted from the next succeeding annual appropriation to such laboratory, in order that the amount of money appropriated to any laboratory shall not exceed the amount actually and necessarily required for its maintenance and support

SEC 7—That nothing in this Act shall be so construed as to impair or modify the legal relations existing between any of the said laboratories or Boards of Health and the government of the States or Territories in which they are respectively located

SEC 8—That in States having Boards of Health entitled under this section to the benefits of this Act, and having also Laboratories of Hygiene established by law, separate from said Boards of Health, such States shall be authorized to apply such benefits to investigations, researches at laboratories so established by such States, and no Legislature shall by contract, express or implied, disable itself from so doing

SEC 9—That the grants of moneys authorized by this Act are made subject to the legislative assent of the several States and Territories to the purposes of said grants, Provided, that payments of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of its Legislature meeting next after the passage of this Act shall be made upon the assent of the Governor thereof, duly certified to the Secretary of the Treasury

SEC 10—Nothing in this Act shall be held or construed as binding the United States to continue any payments from the Treasury to any or all of the States or institutions mentioned in this Act, but Congress may at any time amend, suspend or repeal any or all of the provisions of this Act

There was no discussion upon the foregoing topic or resolutions

An abstract of a report by E B Weston, C E, of Providence, R I, upon "Bacterial Results from Mechanical Filtration," was read by Dr Gardner T Swartz (This paper will be printed in the JOURNAL hereafter)

The next paper was presented by DR S H DURGIN,

ON MEDICAL INSPECTION OF SCHOOLS

The author said It is my purpose to give a brief statement of how work is done in Boston, and the result of four months work, as the machinery to do this was set in motion Nov 1', 1894 The statistics given showed that over one thousand cases of contagious and infectious diseases were detected in time to prevent a spread of the contagion by the medical inspector The city is divided into fifty school districts, giving an average of about four school houses and 1,400 pupils to each district One physician was appointed by the Board of Health for each district at a salary of $200 a year It is his duty to make a visit to each master of schools daily, soon after the beginning of the morning session The master receives from each of the teachers in the district, early reports as to the appearance of symptoms of illness in any pupil under their charge These reports are given to the visiting physician who at once examines the child and makes a record of his diagnosis and action, if the physician finds the child too ill to remain in school, it is sent home for the care of the parents and the family physician

Only favorable reports have been made concerning the operation of the plan The corps of medical men serve an excellent purpose in the control of contagious disease The work is generally approved by the medical profession, by school teachers, and the community at large *For* $10,000 a year, the teachers and 70,000 school children have the benefit of well selected medical oversight

The succeeding paper was a very voluminous one, namely, "Report of the Committee on the Disposal of the Dead," which was read by the Chairman, Dr Charles O Probst It was largely historical, as the committee had taken considerable pains to gather most valuable statistics regarding cremation in this country The report will be printed in full in this JOURNAL later

DR A WALTER SUITER, of Herkimer, N Y, followed with a paper, entitled,

ON THE DISPOSAL OF THE DEAD, HAVING SPECIAL REFERENCE TO THE PREVALENT PRACTICE OF EMBALMING

Herewith is a very brief synopsis as the paper in its original form will be published in the JOURNAL next month

"From remotest antiquity to the present time, topics relating to the disposal of dead bodies have been universally interesting No subject has been more carefully studied from all points of view, and yet it is not inconsistent with facts to state that no material advancement as to methods of preservation or final disposition has been made over those which were practiced more than twenty centuries ago Indeed, there is a growing belief in the public mind that to return to the custom generally in vogue previous to the Christian era (cremation) would solve many perplexing problems with which sanitarians are not unfamiliar"

The Doctor referred to the customs of mummifying the bodies of Egyptians and the practice of cremation in Greece and Rome The common custom of burial of the dead he thought obtained originally from the Chinese

"According to early chronologic records, no branch of art was cultivated in higher degree than that of the embalming of the human corpse Affection and superstition—always the greatest motive powers of the world—together with the prevalent fanciful ideas associated with death and subsequent everlasting life, all combined to give the greatest prominence to the extraordinary, elaborate and costly methods which were employed in the remote periods of civilization for the preservation of dead bodies in order that they might be kept uninterred"

In regard to the present custom of embalming, the essayist argued that there is too much carelessness shown in doing the work by undertakers, without legal regulation to obviate it It is the doorway to an enormous and systematic deception—a commercial fraud, *in fact*, as a comfortable fee is charged for the service

"To illustrate," said the Doctor, "take the case of General Grant Extraordinary precautions were taken to preserve the body The embalming was done in accordance with methods in vogue, but a few days later when the remains reached Albany, the well known features of the distinguished man were almost unrecognizable"

The danger of embalming as a means of concealing crime by poisoning was referred to, and incidents cited to show that it had been done

The result of careless embalming, the essayist claimed was not dangerous 'Gallons of poisonous solutions are squirted into bodies indiscriminately, which are in an incredibly short time imbibed by other bodies in cemeteries and are absorbed by contiguous soils and streams and also wells that are fed by subterranean waters which receive the percolations of graveyards filled with bodies thus treated For example, a recent examination of the waters of Scajaquadu Creek, which flows through Forest Lawn Cemetery, Buffalo, were found to be impregnated with considerable quantities of arsenic of this kind used in the prevalent method of embalming"

A law to regulate embalming, the essayist considered imperative

At 1 30 o'clock the Association adjourned until evening

Third Day—Evening Session

The Association reconvened at 8 o'clock in Unity Church, with President Bailey presiding

The first paper was read by Dr S E Solly, of Colorado Springs, Colo ,

ON THE INFLUENCES PECULIAR TO HIGH ALTITUDES UPON SANITARY CONDITIONS

The paper was a carefully prepared treatise The author said in part With diminished barometric pressure we have less pressure upon the body, hence a diminished amount of oxygen High altitude increases the red corpuscles in the blood The heart is increased in strength and made larger, and the blood has greater ability to absorb oxygen The lungs are rendered more powerful to resist germicidal tendencies There is a more vigorous circulation, hence more violent inflammatory action may supervene, as in acute pneumonia Better results are attained in anemia, or neurasthenia, or where anemia is a prime factor in a disease, also in chronic germ disease as in tuberculosis The germicidal power of the blood is strengthened Typhoid and scarlet fevers and measles are of much milder form than in a lower climate and oftentimes they are unrecognizable Convalescence is more rapid and complete than at sea level In elevated climates there is greater increased precipitation If dizziness supervene, this lessens the temperature upon the body Sunstrokes as a matter of course are rare Myalgias and pleurisy are frequent Dry air, sunlight and sun heat increases nerve tension Dry air allows the sun to shine with greater brightness, therefore with more vivifying effects On the other hand, if the physique is depressed, the effects will be as fatal as in lower climates Horses raised in high regions had been able to endure much fatigue It was the same with men who had a larger lung expansion The dryness improved the action of the skin, liver and bowels in one class of persons, while in another it decreased their action Disease is less easily acquired in high altitudes Nevertheless, people living there must observe as proper sanitary precautions as though they lived elsewhere The author also argued that the amount of hemoglobin in the blood is increased The chest expansion as is remarked frequently by almost all observers is augmented, and especially are the apices of the lungs of the native born children and old residents better filled with air Further deductions were to the effect that where there are other deficiencies in the blood, provided that other conditions do not exist high altitude is a most important factor and influence in the treatment as well as prevention of disease

Dr Henry Sewall, in the discussion said that no such paper should be read without some discussion upon it, as our ignorance of the physiologic condition and vital forces that high altitudes exert upon the human economy is so great No such field for the study of any similar topic presents itself to my mind as this one of the simple problems of blood pressure, etc We should all take up the study of this subject, of the effect of high altitudes upon hearts, to study if their area of dullness is increased, also regarding the increased or decreased action of the liver and skin If there is a decreased action of the skin, the kidneys must reply He has treated cases, and illustrated his remarks, where the urinary secretion is enormous and where hyalin, granular and epithelial casts are very common indeed, due, as he stated, where there was no pathologic condition, but attributable to a less active condition of the skin He thought it was a shame that those who lived in high altitudes did not experiment more upon the effect of high altitude on health He pleaded for individual observation for researches in this altitude and an earnest desire for truth Regarding his personal experience , years ago, before removing to Colorado, a "homeopathic" physician advised him not to do so, as he would die within a week He came here, however, and was glad to be disappointed

Dr Domingo Orvananos, of the city of Mexico, who followed, stated that there was an institution in his city where experiments were made upon the effects of altitude upon disease The average number of red corpuscles in the blood in the high altitude of the city of Mexico, were several millions more than in persons who dwell in a low altitude Consumption in the first and second stages was very easily cured Pleurisy is not as common in Mexico as it is here The remainder of his remarks were confined principally to the methods of heating the houses in Mexico

Dr Peter H Bryce spoke at some length regarding the prevalence of catarrhal troubles and diphtheria which prevails unusually in the central States of the country, and of the large mortality from the latter disease in his province, as well as in certain portions of the United States In Ireland the mortality of those dying of diphtheria is one third less than in England In England, those who succumb to diphtheria are one half less than in Ontario, hence her record is better than in Canada, while in Ontario the mortality from diphtheria is the same as in the United States If the methods of heating dwelling houses have anything to do with the prevalence of diphtheria, or of inducing diphtheritic throats and so-called catarrh, wherein is the relation between abnormal dryness and these maladies? He desired to know about the frequency of catarrh said to exist in this climate?

Dr Carl Wende desired a little more information regarding the presence of hyalin casts in the cases cited by Dr Sewall

Dr Eduardo Liceaga, of Mexico, stated that the climate of Mexico is divided into three zones High altitude, which is 2,000 meters above sea level, medium altitude which is below this and low altitude or sea level In the latter zone, tubercular disease is very frequent, and microörganisms were readily recognized there The disease is difficult to cure In the medium altitude, phthisis prevails to a very much less extent, while at 2,000 meters, or above this, it does not exist at all

Dr Gregorio Mendizabal, of Orizaba, Vera Cruz, Mexico, briefly stated his observations by calling attention to the influence of humidity in different litttle towns of the Republic, on the development of phthisis Dampness also has a great deal to do with development of microorganisms and this disease

Dr Solly concluded by saying We cry loudly for careful research and the study of facts regarding the influence of high altitudes upon the human system Physiologists state it as a broad proposition that a high climate is good for thin blooded people He answered Dr Bryce by stating that diphtheria was not uncommon on high ground, and when it did exist it was not so contagious as on low ground, but if it became contagious it was likely to be very virulent The peculiar conditions of the dryness of the upper air'passages render them more easy for lodgment of germs, and then disease is more serious in high altitudes, and yet high altitudes are prejudicial to germ diseases As regards humidity, we know this will induce tubercular difficulties Cold and dampness combined is also a peculiar element to bring it on The relative frequency with which phthisis is induced might be studied and compared, in a cold damp climate and a hot damp climate Catarrhal troubles exist frequently and indiscriminately in different climates

The next topic announced on the evening's program was the "Report of the Committee on the Abuse of Alcoholic Drinks from a Sanitary Standpoint," and was made by Dr Felix Formento, Chairman, of New Orleans, La The subjoined excerpt is herewith presented, as the report *in toto* is a most extensive one

The crusade against alcoholism is universal, and the question is now being investigated in a most scientific and thorough manner Physicians, clergymen, statesmen and others have banded themselves together, hoping to eradicate the abuse of alcoholic drinks

Alcoholism does not apply to taking a glass of pure wine at meals or a glass of pure whisky The use of beers and wines at meals might be commended—both were valuable because of their nutritive qualities , they helped digestion and invigorated without intoxicating He defined alcoholism to mean the chronic excessive use of alcoholic drinks The drunkard should not be confounded with the gentleman who takes his wine at table The habitual use of strong liquors can not be too strongly condemned

French brandy, when pure was less injurious than either rum or whisky In wine growing countries like Italy, alcoholism was almost unknown One of the committee, it was related lived six years in Italy, and never in that time saw a really drunken man, but only jolly, good-natured ones This incident was mentioned in connection with a statement that there is less intoxication in wine growing countries and districts than in portions of the country where no wines are grown The worst alcohol is the potato article, which contains the deadly fusel oil In America many of the distinguished men of the country are addicted to the use of alcohol, and it seemed to be the national vice This is the only country in the world where the people high and low drink standing, without eating, and without being thirsty

Alcoholism is one of the potent factors in crime, suicide and poverty It peoples the hospitals it is responsible for cripples, epileptics, and while it exists mostly among the and invade the adjacent muscle bundles The arteries were, in the main, free from any changes

The muscle fibers themselves showed extensive retrogressive changes, being at times the seat of a simple atrophy, at other times vacuolated or fatty In some of the connective tissue masses the muscular tissue had disappeared completely, leaving sometimes heaps of pigment behind In some places one could find zones of hyalin necrosis in the myocardium adjacent to markedly dilated veins These changes were not evenly distributed, being most marked in the walls of the ventricles, less in the interventricular septum and still less marked in the auricles The intensity of these changes was greatest in those individuals who had suffered from repeated attacks of asystole and in whom the final condition of cardiac weakness had lasted the longest

It is quite clear that such changes belong to the cirrhoses and that the point of origin was in the venous walls The morbid changes described can consequently be included under the name of venous cirrhoses in contradistinction to the arterial cirrhoses which develop in connection with lesions at the aortic valves

How can the genesis of this venous cirrhosis be explained? The right ventricle has not sufficient reserve power and in consequence early attacks of asystole develop in mitral disease During such an attack the circulation of the blood in the veins is hindered The venæ cavæ can not empty themselves readily, stasis in the liver and kidneys, and edema come on In addition to the caval veins, the coronary and small accessory coronary veins also empty into the right auricle and the coronary veins therefore meet with the same difficulties as the caval under these conditions and, consequently, a stasis develops in the myocardium as well as in the liver, kidneys and elsewhere The anatomic changes found in the myocardium show this inference to be correct Repeated stasis results in retrogressive changes in the muscle fibers and these lesions enfeeble contractility and renewed disturbances of compensation occur after slighter provocation Finally, hyperplasia of the connective tissue ensues and the heart muscle at last is no longer able to perform its functions There arises a *circulus vitiosus*, inasmuch as the lessened contractility increases the stasis in the changed heart muscle which on its side diminishes the power of contraction

BANTI considers, as will have been observed, the mitral lesions as due to endocarditis, and the aortic lesions as due to atheroma This is undoubtedly true in the majority of cases, but it can not be denied that there are aortic lesions of inflammatory nature, and mitral of atheromatous, and the myocardial changes that cause disturbances of compensation in such cases he does not attempt to discuss

The essential outcome of BANTI's investigation may be stated in this way,—that in aortic valvular lesions, due to an atheromatous process, the principal cause of the final disturbance of compensation is an arterial sclerosis of the myocardium, while in mitral lesions, due to endocarditis, compensation is disturbed and at last destroyed on account of a myocardial sclerosis of venous origin

POPULATION AND LONGEVITY

Some years ago, a prominent medical writer published an account of an ideal "City of Health," an assumedly impossible municipality in which all preventable causes of disease were avoided, and the death rate lowered to two or three in the thousand by faultless construction and organization and absolutely perfect sanitation The article was widely quoted in the lay and medical press, and everywhere with approval, until a mathematician or an actuary ventured to figure on the possibilities and demonstrated that with such a death rate without a corresponding reduction in births, there would not, in a relatively very few years, be standing room for the population in such a community

Man is a very prolific animal and the procreative instinct is one of the strongest in our nature, certainly this is so with what has been called in continental Europe, the proletariat, a class that includes mainly the improvident poor, and therefore a large proportion of the population of the great cities in this country, as well as abroad Prudential considerations have little weight with this class of individuals, and were the death rate low and longevity the rule, the inconveniences of over-population would soon be manifest As it is, the urban tendencies of this class and the consequent degeneracy (which properly signifies any tendency to race decay), may possibly save us from having to meet with the Malthusian problem in a severely practical form

If the average of human life were 100 years, as it has been claimed it should be, and were perfect sanitation and the reign of universal peace, the ideal of philanthropists, to be realized, the near future would show an inconveniently over-populated world, unless some providential dispensation stepped in to give us elbow room or some social regulation were adopted, such as raising the marriageable age, ruling out all but the physically, morally and mentally best fitted from the privilege of procreation, or some other similar device It is doubtful whether mankind would be any happier under such conditions, but they would be found indispensable in the social Utopias such as that of BELLAMY, were these ever realized The rock of population is the one on which, as MR BENJAMIN KIDD in "Social Evolution" says, all these social systems split, it is the problem of which their authors take no account Over-population would work its own cure through intensified human misery and degeneracy, possibly, as has repeatedly happened with the lower animals in localities, with the more or less complete extinction of the species

While, however, one can thus even say a good word for human degeneracy, as perhaps on the whole a safety valve for populations collectively, it is individually an evil, and one that needs to be vigorously met Man can not control evolution, and so far as he can be effective, he must use his efforts to combat obvious evils, and leave general results to work out themselves There is therefore no excuse for lowering our sanitary ideals The problems here suggested are not for immediate solution, and matters can be very much improved before unusual longevity and general perfection in health conditions render them at all practical But they are perhaps worth considering, if it is only to temper a little our hygienic air castles and as a sort of consolation for our unavoidable sanitary failures

'DRUGS MANY REMEDIES FEW"

The current issue of *New Remedies* quotes this caption from the *Hospital* as being a succinct summary of the present pharmaceutic situation Since 1880, "while two hundred remedies have been introduced, probably not more than twenty are in daily use" Twenty years ago the words "new remedies," designated botanic products introduced as newly discovered agents of extraordinary therapeutic value Ten years later, synthetic chemistry, beginning with antipyrin (the first notable success) usurped the title And now bacteriology is fast pushing the autocrat of the last decade into retirement

If present activity in, and enthusiasm over, serums, antitoxins and extracts continue, and are justified by results, we may have to discard all our old materia medica before the end of this century But on this point the *New Remedies* is not sanguine, its sympathies being somewhat closely identified with the products of the manufacturing chemist, although free to admit that these interests have been hurtfully overdone

The therapeutic pendulum has swung, first away from botany, next away from chemistry and presently, it is predicted, the swing will be away from bacteriology We note, in the foreign letter of the *American Practitioner* the following intimation, that our German confrères are disposed to swing back to botany

"An important step is about to be taken by the Berlin Pharmaceutical Society, for the purpose of extending the world's knowledge of poisonous and healing plants A central office is to be established for collecting and publishing reports from every quarter of the globe on the botanic, chemic, and pharmacologic discoveries in plants of a healing or poisonous nature The Berlin Society does not intend merely to collect unknown facts, but hopes to encourage further inquiries in a field which has not yet been fully explored"

For the present, however, the German bacteriologists are said to be so fully occupied with their respective original researches, that they have no time or patience to expend upon students from abroad Some ambitious students from this country have returned, not without disappointment at the scant attention they were able to obtain at some of the foreign laboratories, chiefly for the reason that the teachers are, for the time being, preoccupied with their own special investigations

GENUINE DIPHTHERIA OF THE SKIN

A few cases of genuine diphtheria of the skin have been described, in which the diagnosis rests upon the cultural and microscopic demonstration of Loffler's bacilli Brunner[1] describes four cases of this unusual infection of the skin upon the fingers, Neisser[2] found diphtheria bacilli in a membranous deposit near the anus, Treitel[3] in an excoriated area near the external ear, Vucetic[4] describes an extensive diphtheria of the skin of the neck in which the bacilli were demonstrated microscopically but not in cultures Feer,[5] Escherich[6] and Townsend[7] describe genuine diphtheria of tracheotomy wounds Park[8] has recorded two cases of genuine diphtheria in finger wounds in physicians, the infection following tracheotomies, and Wright[9] details seven instances of diphtheric infection in excoriations and exulcerations of the skin as, for instance, in connection with paronychia and mastoid abscess Abel[10] has also described diphtheria in a wound of the finger

In addition to these cases of wound diphtheria of the fingers, recorded by Brunner, Park and Abel, a new case is added by Zaufal (*Prager medicinische Wochenschrift*, 1895) This case occurred in a child, 4½ years old, with fatal laryngeal and pharyngeal diphtheria He succeeded in demonstrating in the microscopic sections, as well as in cultures, that Loffler's bacillus was present in an infiltration, 1 cm square in size, situated upon the ulnar margin of the first phalanx of the right index finger The center of this area was ulcerated and covered with a fibrinous deposit The cultures of diphtheria bacilli obtained possessed a considerable degree of virulence as 1 ccm of a two days' old bouillon culture killed a guinea pig, 300 grams in weight, forty hours after intraperitoneal injection In addition to the diphtheria bacilli, the yellow pus coccus was isolated from the infiltration in the skin of the finger, and Zaufal regards the case as an instance of genuine wound diphtheria which was engrafted upon a scratch in the skin that had been infected with the staphylococcus pyogenes aureus

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[1] Cited by Escherich Etiologie und Pathogenese de epidermisch Diphtherie, Wien, 1894 I

[2] Escherich loc cit

[3] Escherich loc cit

[4] Allg Wr Medic Zeitg, xxxix, No 50

[5] Escherich loc cit

[6] loc cit

[7] Welch, Bact Investig of Diphtheria in the United States Am Jour of Medical Sciences October, 1894

[8] Welch loc cit

[9] Welch loc cit

[10] Escherich, loc cit

MAJOR A C GIRARD

Major A C Girard, U S Army, who has been stationed at Fort Sheridan, Chicago, for the past four years, has been ordered to Fort Douglass, Salt Lake City, Utah Major Girard was given a farewell reception and a dinner by Dr F B Turck and some of his medical friends in the city, who view his departure with regret

The occasional contributions of Major Girard which have appeared in these columns, not less than the one in this issue of the Journal show him to be an accomplished surgeon, and one no less gifted with the pencil than the pen Few of our profession are able to so skillfully illustrate their own articles

The medical profession of Salt Lake will receive a notable addition to their ranks in the person of Major Girard

CORRESPONDENCE.

Association of American Medical Colleges.

Chicago Oct 9, 1895

To the Editor —The decision of the Judicial Council is asked upon the following propositions

1 Is there any rule to prevent colleges, members of the Association, from admitting students in September, 1895, and allowing them to graduate, after taking three full courses of lectures, ending in 1898?

2 If such rule exists and is enforced, what will be done to those colleges, members of the Association, who violate the rules? Shall recognition be refused to diplomas issued to students in 1898 because they began the study of medicine in 1895?

3 Students A and B matriculate in 1895 A graduates in 1898, B in 1899 Are the two on equal footing according to the rules of the Association?

DECISION

1 It is the judgment of the Council that there is no rule of the College Association preventing any of the members matriculating students in September, 1895, and allowing them to graduate after taking three full courses of lectures of six months each, in three separate years, ending in 1898

2 The Council is now prepared to decide what should be done with colleges which violate any of the rules of the Association

3 It is the judgment of the Council that A and B must be recognized as of equal respectability Because the progressive advancement in methods of teaching, *pari passu* with the increasing demands for more lengthened collegiate instruction, must have a definitely stated date of beginning, and can not be made retroactive If this rule could be made *ex post facto*, all the elder members of the profession might be rated as of inferior standing to those gentlemen who now graduate under our graded system of instruction, and are required to have attended more terms, and for a longer period of time than was formerly exacted

Signed by,

Dudley S Reynolds,
Julian J Chisolm,
Starling Loving,
James H Etheridge,
Albert R Baker,
Victor C Vaughan

Attest Lillie B Baldwin, Clerk
Bayard Holmes, Secretary

Did Not Boom an Irregular Device

Chambersburg, Pa, Oct 7, 1895

To the Editor —I send you by this mail, a reprint of my article on "Electricity," not so much on account of any merit it may possess, but to demonstrate to you how little your reporter understood what I was talking about when he wrote you the report of the proceedings of our State Society He must have been a very serious man to fail to see that I was poking fun at "Electropoise," and write you that I said that *argon* was what was driven into the system, etc

Look at the report, and then at the latter part of my article, and determine whether I was too ponderous at my fun, or be too dull of comprehension

No serious harm has been done—the "Electropoise" men have not yet thanked me for my ad through your Journal, nor yet have they "gone for me" for my temerity in handling their pet instrument Very truly yours,

Geo S Hull, M D

ASSOCIATION NEWS

Section on Ophthalmology —Report of the Secretary

Place of meeting, gentlemen's reception room, Music Hall Meeting called to order at 3 30 p m, by the chairman, Edward Jackson, of Philadelphia, Pa, who delivered the Annual Address, "The Strength of the Different Mydriatics and Myoptics" At the close of the address a resolution was passed limiting time for reading of papers to ten minutes and discussion to five minutes for each speaker A R Baker, of Cleveland, Ohio, read a paper on "Incipient Cataract," followed by J E Weeks, of New York, with "The Operative Treatment of Immature and Some Forms of Zonular Cataract"

The discussion on these papers was opened by Geo E Frothingham, of Detroit, Mich, followed by Herman Knapp, of New York, Joseph A White, of Richmond, J L Thompson, of Indianapolis, Jas A Lydston, of Chicago, F C Hotz, of Chicago, S D Risley, of Philadelphia, A J Erwin, of Mansfield, Dudley S Reynolds, of Louisville Discussion was closed by J E Weeks, of New York

The first of the papers on "Operations About the Eye" was read by M W Zimmermann, of Philadelphia, Pa, on "Practical Points on Anesthesia for Operations about the Eye," Dr Tyree, of Kansas City, and Eugene Smith, of Detroit, being absent, the next paper of the series was read by W B Johnson, of Paterson, N J, on "Transplantation of Skin in Plastic Operations on the Eyelids" He was followed by F C Hotz, of Chicago on "Skin Grafting in Ectropion and Entropion" The next paper was by Herman Knapp, of New York, on "Transplantation of a Strip of Skin into the Intermarginal Space of the Lids" The last of the series was by Herbert Harlan, of Baltimore, Md, on "Some Cases of Restoration of Eyelids with Exhibition of Patients" The discussion was opened by R A Reeve, of Toronto, followed by H V Würdemann, of Milwaukee, D S Reynolds, of Louisville, E J Bernstein, of Baltimore, Lucien Howe, of Buffalo, J P Worrell, of Terre Haute, P D Keyser, of Philadelphia, S D Risley, of Philadelphia, G C Savage, of Nashville, Frank Allport, of Minneapolis, Hiram Woods, of Baltimore, Herman Knapp, of New York, and M W Zimmerman, of Philadelphia In the course of the discussion, patients were exhibited by Herbert Harlan and E J Bernstein

Wednesday, May 8—Morning Session

Meeting called to order at 9 10 a m By request the Chairman called for the report of the Committee on Legislation for the Prevention of Blindness which was presented by the Chairman, Lucien Howe, of Buffalo, N Y On motion by Leartus Connor, seconded by H M Starkey, the thanks of the Section were tendered and the committee extended L Webster Fox read a paper on "Evisceration of the Eyeball," upon which the discussion was opened by S D Risley, of Philadelphia, followed by G Oram Ring, of Philadelphia, F C Hotz, of Chicago E Oliver Belt, of Washington, H Gifford, of Omaha, L J Lautenbach, of Philadelphia, R C Hodges, of Houston, and discussion closed by L Webster Fox, of Philadelphia

The next paper was by Geo E de Schweinitz, of Philadelphia, Pa, on "Histologic and Bacteriologic Notes on Some Cases of Penetrating Wounds of the Eyeball with Experimental Observations on Certain Bacilli found in a Case of Post-Suppurative Panophthalmitis," discussion of which was opened by R L Randolph, of Baltimore followed by Harold Gifford, of Omaha

The next paper was by Harry Friedenwald, of Baltimore, on 'Hemorrhage into the Retina and Vitreous in young Persons, Associated with Evident Disease of the Retinal Blood Vessels—Remarks on the Formation of Vessels in the Vitreous in a Case of Immigrating Subhyaloid Hemorrhage", followed by E Oliver Belt, of Washington, D C on the 'Prognostic Significance of Albuminuric Retinitis," and by J T Carpenter Jr, of Philadelphia, Pa, on "Extensive Colloid Changes in the Choroid with Report of Cases" Discussion opened by Geo E de Schweinitz, of Philadelphia, B Alexander Randall, of Philadelphia, Harold Gifford of Omaha, Herman Knapp, of New York, and J T Carpenter Jr, of Philadelpha

Wednesday, May 8—Afternoon Session

Called to order at 3 P M The Nominating Committee reported as follows for President, Lucien Howe of Buffalo, for Secretary, Frank Allport, of Minneapolis Upon motion of J H Thompson, seconded by G C Savage, it was resolved that the report of committee be accepted and the Secretary was instructed to cast the ballot electing the above named officers A series of papers then followed upon the "Ocular Muscles," the first of which was by Leartus Connor, of Detroit, Mich, "The Technique of Tenotomy of the Ocular Muscles" Samuel Theobald, of Baltimore, Md, 'The Slight Effects Sometimes Produced as the Results of Free Tenotomies of the Ocular Muscles for Heterophoria", H F Hansell, of Philadelphia, Pa, "The Limitations of Tenotomies of the Ocular Muscles", C H Thomas, of Philadelphia, Pa, 'Tendon Advancement with a Special Indication for its Employment", G C Savage, of Nashville, Tenn, 'The Indications for Advantages and Technique of Muscle Shortening" *Geo T Stevens of New York*, opened the discussion by reading a carefully prepared paper followed by S D Risley, of Philadelphia, A J Erwin of Mansfield, Samuel Theobald, of Baltimore, Herman Knapp, of New York, F C Hotz, of Chicago, G Hermon Thomas, of Philadelphia, G Edgar Dean, of Scranton, Frank Allport, of Minneapolis, Leartus Connor of Detroit, G C Savage, of Nashville, G T Stevens, of New York C M Hobby being absent the next papers were by Hiram Woods, of Baltimore, 'To What Extent Should Recently Suggested Methods of Muscular Exercise Displace Tenotomy in the Treatment of Heterophoria" J W Park, of Harrisburg, Pa on '*Practical Points Gained in the* Treatment of 1,000 Cases of Insufficiency of the Ocular Muscles", E J Bernstein, of Baltimore, Md, 'Some Remarks on Paralysis of the Superior Rectus Muscle", followed by G M Gould, of Philadelphia Pa, on "Some Findings Concerning Muscle Imbalance and its Treatment" The discussion was opened by Leartus Connor, of Detroit, followed by G C Savage, of Nashville, G H Price, of Nashville, Geo S Hull, of Chambersburg, R A Reeve, of Toronto, G Edgar Dean, of Scranton, Hiram Woods of Baltimore J W Park, of Harrisburg, and E J Bernstein, of Baltimore Henry Gradle, of Chicago, was absent but his paper on "Hysterical Insufficiency of Convergence," being in the hands of the Secretary was read by title

Thursday, May 9—Morning Session

Meeting called to order at 9 15 A M The first paper read was by J A Lydston, of Chicago Ill., "The Relationship Between the Eye and Brain" Next paper was by S C Ayres, of Cincinnati, Ohio, on "Lymphangeoma Cavernosum of the Orbit" Dr Ayres being absent, and his paper in the hands of the Secretary, it was read by title P D Keyser and C A Oliver being absent a paper by Flavel B Tiffany, of Kansas City, Mo on 'Ectopia Lentis," was read This was discussed by J L Thompson of Indianapolis, A R Baker, of Cleveland Harold Gifford, of Omaha, F C Hotz of Chicago, B A Randall, of Philadelphia, Herbert Harlan, *of Baltimore, S L Ziegler, of Philadelphia, J A Lydston*, of Chicago, R C Hodges, of Houston, and closed by Flavel B Tiffany, of Kansas City

P D Keyser, of Philadelphia, Pa, then read a paper on "A Case of Enchondroma of the Cartilage of the Upper Lid," which was discussed by F C Hotz, of Chicago, J L Thompson, of Indianapolis, S L Ziegler, of Philadelphia, and closed by P D Keyser

The paper of W H Wilder, of Chicago, on "Formalin as a Preservative Agent for Eye Specimens," was, in the absence of the author, read by title Dr F C Hotz exhibited the specimens, and made explanatory remarks He was followed by H V Würdemann, of Milwaukee, H M Starkey, of Chicago, E J Bernstein, of Baltimore, and Geo E de Schweinitz, of Philadelphia

The next paper was by H V Würdemann, of Milwaukee, on "The Infiltration Method of Anesthesia in Ophthalmic Practice," with demonstration This was discussed by Gilbert E Seaman, of Milwaukee, Geo E de Schweinitz, of Philadelphia, G Edgar Dean, of Scranton, J C Dunlevy, of Sioux City, Flavel B Tiffany, of Kansas City, A C Corr, of Carlinville, Ill, and closed by H V Würdemann The technique of the injection was shown upon the arm of one of the ophthalmologists present, and a patient was introduced by Harry Friedenwald, of Baltimore, with sebaceous cysts on the forehead who was operated on under anesthesia by this method for purpose of demonstration

Thursday, May 9—Afternoon Session

Meeting called to order at 8 15 P M B Alex Randall, of Philadelphia, presented the Report of the Committee on the Examination and Care of the Eyes during School Life After reading the report, Dr Randall read a paper on 'The Importance of Noting Slight Choroiditic Changes, especially Conus" These were discussed by P A Callan, of New York, S D Risley, of Philadelphia, A J Erwin, of Mansfield, Frank Allport, of Minneapolis, Frank Fisher, of Philadelphia, R A Reeve, of Toronto, Dunbar Roy, of Atlanta, G H Price, of Nashville, Lucien Howe, of Buffalo, L B Ryan, of Galesburg, Leartus Connor, of Detroit, G Edgar Dean, of Scranton, J L Thompson, of Indianapolis, and closed by B Alex Randall

Dr Mittendorf being absent, the next paper was read by H Bert Ellis, of Los Angeles, Cal, "A Study of the Refraction of 1,000 Eyes" Dr Southard, of San Francisco, being absent, *this was followed by S D Risley, of Philadelphia, on* "The Percentage of Symmetrical and Asymmetrical Meridians of the Cornea in Astigmatic Eyes" Dr H M Starkey followed with "Latent Astigmatism", L J Lautenbach, of Philadelphia, on "The General and Local Conditions that change Corneal Curvature" Discussion by Frank Fisher, of Philadelphia, Edward Jackson, of Philadelphia, A C Corr, of Carlinville, Ill, P A Callan, of New York, H M Starkey, of Chicago and L J Lautenbach, of Philadelphia

The Executive Committee reported the subject for collective study by special committee for the next year, 'Detachment of the Retina its Etiology and Treatment' They further suggested to the Section as a topic for study and presentation, 'Cases of Optic Nerve Atrophy of Obscure Origin" The chairman appointed on the first *committee* R L Randolph Chairman, 211 W Madison Avenue, Baltimore, Md F C Hotz, 36 Washington Street, Chicago, E E Holt, 723 Congress Street, Portland Maine, J E Weeks, 46 East 81st Street, New York, T E Murrell, 6th and Olive Streets, St Louis, Mo

On the second committee H V Würdemann, chairman, 805 Grand Ave, Milwaukee, G E de Schweinitz 1401 Locust Street, Philadelphia, H Friedenwald, 922 Madison Avenue, Baltimore, Md, C W Kollock Charleston, S C G Dunbar Roy, *56½ Whitehall* Street, Atlanta, Ga

Friday, May 10—Morning Session

Meeting called to order at 9 30 P M The only remaining paper of the program not having been read, whose author was present, was by A C Corr, of Carlinville, Ill, on 'Anomalies in Ophthalmic Practice" Discussion by J L Thompson, of Indianapolis, H V Würdemann, of Milwaukee, R L *Randall*, of *Baltimore*, and closed by A C Corr, of Carlinville

This completed the list of *papers The chairman* congratulated the Section on the scientific work of the meeting, and especially as it was the largest gathering of ophthalmologists ever held in this country (one hundred and six having registered) The Section then adjourned to meet the following year

H V Würdemann, Secretary

SOCIETY NEWS

The American Association of Gynecologists and Obstetricians —Dr Franklin H Martin delivered the following toast at the annual banquet of this Association

Mr President —The name, birth, policy and success of your society possess inspiration for as many toasts Its name reminds us of American gynecology Its time of birth coincides very closely with the new birth of medicine Its policy—genuine scientific work for our specialty—broad as our country in its membership, democratic as our republic in its constitution, commands respect Its success so remarkable that those once its opponents halt and applaud, is only accounted for by its magnificent and representative membership As President of the Chicago Gynecological Society, in a position to speak officially for the gynecologists of Chicago, I voice their sentiments when I say we are proud to have you honor our city with your presence You honored your society by calling it American In no place in America does the eagle scream louder or in more unmistakable tones than right here in Chicago

Your society came into existence with the new birth in surgery, when surgery as a science began to predominate, and surgery as an art began to recede In other words, with the renaissance of medicine Moss-covered and absolute traditions you left behind You got away from narrow provincialism and crossed the Alleghanies, the Rockies, and even annihilated the imaginary Canadian line which hitherto divided the Americans of the North from those of the South In this, as Chicagoans, we appreciate you and embrace you

Old foggyism was in its death throes before Chicago become a city In medicine and surgery *we* are *all* renaissance We have a code in Chicago broad enough even for your honorable secretary, which is indelibly impressed upon every one of our memories It is "Do unto others as you would that they should do to you, and the Lord help him who doesn't"

We know of but one country and, like you, we annex all competitors, and naturalize all foreigners Like you, without prejudice we take that which is good from all lands, and without regard to traditions we reject that which is useless, and that which we finally possess is indelibly stamped with the American eagle and henceforth becomes our own

It is such societies as yours, Mr President, which will make us more and more proud of that name—American—which will reiterate the fact every year with abundant proof of its truth, that American gynecology and abdominal surgery has from the beginning of modern medicine led the world

We must not forget, nor allow the fact to become obscured that anesthetics, without which gynecology would be impossible, were discovered and employed first by Morton of Boston

We must not forget, nor allow foreign authors to forget, that the first ovariotomy was performed by Ephraim McDowell

We must not forget nor fail to honor the fact that Gilman Kimball of Boston, proposed and executed the first abdominal hysterectomy for fibroids

We must not forget that modern plastic gynecologic surgery was founded by Marion Sims

We must not forget nor allow the fact to become obscured in literature, that the first modern vaginal hysterectomy was performed by Lane of San Francisco

We can not forget, nor should we, that the removal of the uterine appendages for the establishment of an artificial menopause was deliberately planned and executed by Robert Battey, coincidently with, but independently of two other great surgeons

And finally, gentlemen, we have not forgotten nor will it be forgotten as long as abdominal surgery has a history, that the principles of modern intestinal surgery were founded by Nicholas Senn

Gentlemen, for a young nation have we not the right to be proud of our achievements? Is there another nation, old or young, which can show so long a list of practical works which have been adopted as the most important legitimate life-saving procedures by the whole world? Take from gynecology and abdominal surgery those procedures initiated by Americans and our specialty would have no existence

So, Mr Chairman, we extend to you a Chicago welcome The important work your society is doing can not help but maintain our specialty in the front rank of the medicine of the world

And finally, let us as American gynecologists, in whatever society we work; cultivate a scientific conscience, so that we may interpret aright Cultivate a laudable ambition so that we may work with enthusiasm—and most of all cultivate *patriotism* so that American achievements will have their full importance in our hearts

Chicago Ophthalmological and Otological Society —Regular meeting held May 14, 1895, at 155 Dearborn Street[1] There were ten members and visitors in attendance Dr Hotz in chair

The minutes of the last meeting were read and approved

Drs W R Fringer and A B Hale were elected members

Dr Wilder said that the case of paresis of extrinsic muscles, reported by Dr Gradle, was now improving under potass iodid

Dr Coleman reported a case of gumma of the sclera Woman, 26, whose symptoms began early in winter V O S =20-200, marked conjunctival injection, iris discolored, no pupillary reaction, a gumma-like infiltration at upper and outer sclero-corneal margin extending into cornea With atropin and potass iodid no improvement took place and subconjunctival injections of corrosive sublimate were were used Under this treatment a cure rapidly took place

Also a case of hemiopia Woman, 37, confined last November, was unconscious for six weeks, fundus shows no retinitis, left homonymous hemiopia extending through macula, color fields for red and green much diminished, V each eye 20-20, pupillary reaction slightly subnormal Dr Tilley thinks that such cases are due to a toxic agent, chiefly syphilis He had a case very similar

Dr Tilley had a case of diplopia above and below horizontal line which disappeared in ten days Patient had a tooth pulled a few days before and piece of jaw was broken off Dr Wood reported case and showed sections of intra-ocular tumor Patient was over 40 No irritation, only slight increase of tension Nature of tumor rather obscure but probably glio-sarcoma

Dr Wilder thought it was a sarcoma

Dr Wood showed a combined red and blue gelatin mask for use before an electric furnace.

Dr Hotz gave a short account of the proceedings of the Ophthalmological Section at Baltimore

On motion the Society adjourned

103 State Street C P Pinokard, Secretary

NECROLOGY

John S Young, M D, of Brooklyn, died September 23, aged 63 years The cause of his decease was general peritonitis, lasting four days, supervening upon malignant disease of the gastro-hepatic omentum of a prolonged duration Dr Young was born in Brooklyn, educated at Fordham College, and a graduate from the College of Physicians and Surgeons, New York, in the class of 1854 He was for eight years connected with the Department of Health, as register of vital statistics or deputy commissioner, from which department his connection was severed about a year and a half ago He was forty years closely identified with, and served as secretary for, the Kings County Medical Society nearly ten years He also served that society in the capacity of vice-president He was a member of the consulting staff of St Mary's Maternity, and a member of several important social organizations Dr Young came of a family of physicians, several of his immediate progenitors having engaged in the practice of medicine He leaves a widow and three sons, the eldest of them being a physician

W S Youngblood, M D, of Groveton, Texas, October 6 ——D B Williams M D, of Louisville, October 6, aged 62 ——George W Stoddard, M D, of Ramsey, Ill, October 11, aged 33 ——T M Fettermann, M D, of San Antonio, Texas, October 6, aged 53

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[1] Received at the Journal office, Oct 12 1895

PUBLIC HEALTH

Advice to Bicyclists —Rocheblave gives to bicyclists the following good advice from a medical standpoint 1, no one should ride until after an examination by a physician This examination should be made both before and after a walk or run, for some cardiac lesions only manifest themselves after a state of fatigue 2, ride no faster than 12 kilometers an hour 3, as far as possible guard against the desire to ride any faster It is very difficult not to give way to the "delirium of swiftness" With a light machine on a good road an amateur may easily make 25 kilometers an hour This is too much, for the pulse is increased to 150, even at 14 and 16 kilometers per hour[1]

Michigan State Board of Health.—The State Board of Health met in regular meeting, at Lansing, at 10 30 A M, Friday, October 11 Hon Frank Wells, president Hon A V Mc Alvay, Prof Delos Fall, Dr Samuel G Milner, Dr George H Granger, and Secretary Henry B Baker were present The regular business of auditing the bills and accounts was transacted Dr Milner, of Grand Rapids, offered the following resolutions, which were adopted by the board

Resolved, That hereafter the appointment of clerks in this department shall be in accordance with the principles of civil service, the service being classified if necessary, and appointments being made in each class by promotion for merit and length of service, or by examination, salaries to be graded according to class and term of service

Resolved, That the President, Secretary and one other member appointed by the President, constitute a committee who shall present the details of a plan in accord with the principles above stated

Dr Milner was appointed the other member of the committee Dr Cattermole was granted a leave of absence until April, 1896 One other clerk has gone to the University This made two vacancies in the office, and Mr Thomas S Ainge, of Detroit, and Sheldon B Young, of Lapeer County, were appointed to clerkships in the office

The Secretary presented the subject of reprinting some of the educational pamphlets which the office endeavors to distribute to the family and the neighbors of the person sick with a dangerous disease Several members stated that they believed these pamphlets and leaflets were of great benefit in the education of the people, just how to restrict and prevent each of the dangerous diseases The board were unanimously of opinion that these pamphlets of instructions should be reprinted in sufficient numbers to distribute wherever a communicable disease exists throughout the State The board authorized the Secretary to print 20,000 copies of the pamphlet relating to the restriction and prevention of diphtheria, 10,000 of the one relating to the restriction of consumption, and 10,000 of the leaflet relating to the restriction of typhoid fever The Secretary was directed to ascertain the best way to have the revised leaflets relative to diphtheria, typhoid fever and consumption translated for publication in the German and Holland languages

Secretary Baker presented a statement of the smallpox and typhoid fever in Michigan during the past quarter, and the present outlook for those diseases The Secretary's quarterly report of work in the office showed that more than the usual amount of work and considerable new and valuable work had been done One of the most important lines of new work was in connection with a 'blue letter" (official demand for reports, transmitting publications, giving information, etc) and with a final report to be used in collecting information tending to show the results of efforts for the restriction of consumption It is hoped that in consequence of these papers much valuable information will be received at the office of the Secretary

New work had also been done on a "final report" blank to be used in collecting information regarding the results of efforts in the restriction and prevention of smallpox in Michigan It is hoped that, through this series of questions, much valuable information will be received

An interesting letter from the Health Officer of Kalamazoo, was presented and read The letter is of special interest because it shows that Michigan is not behind in the most advanced public health work, it read as follows "In our present epidemic of diphtheria, which is clinically of a milder type than I have ever seen before, bacteriologic examination by a competent bacteriologist, who is paid by the city, is made in every doubtful case, especially so in the beginning when a strict diagnosis is hard to be made In the larger proportion of cases, antitoxin treatment has been used with good result To people who are unable to stand the expense, the city furnishes the antitoxin and the operator free of charge"

Secretary Baker presented reports from a few other cites, not in Michigan generally favorable to the use of antitoxin for diphtheria, and relative to the bacteriologic examinations, one report was from Rochester, N Y, which stated that through the bacteriologic tests, "many mild cases of diphtheria have been discovered which were formerly determined to be sore throat," and whereas such cases were formerly allowed to continue to spread diphtheria, they are now being restricted

A plan was presented for obtaining, through reports from health officers, a sectional township map of Michigan, exhibiting the residences of consumptives, for use in studying the parts of the State where the disease is most prevalent also for a study of the extent to which infected houses spread the disease, and the effects of disinfection of such houses Such permanent records may throw light on the origin of future cases of consumption in the same townships

Health Reports —The following health reports have been received by the Supervising Surgeon-General, Marine-Hospital Service

SMALLPOX—UNITED STATES

Illinois Chicago September 1 to 30, 2 deaths
Louisiana New Orleans, October 10, 30 cases
Michigan September 28 to October 5, smallpox reported at Battle Creek, Bedford Township and Detroit
New York New York, October 5 to 12, 1 case

SMALLPOX—FOREIGN

Mauronillo (Cuba) August 1 to 31, 11 deaths
Santos September 7 to 14, 2 cases
Wigan (Eng) June 1 to October 1, 48 cases
London (Eng) September 21 to 28, 2 deaths
Dublin September 21 to 28, 2 cases, 2 deaths
Madrid September 20 to 27, 6 deaths
Moscow September 7 to 14, 1 case
Nogales September 28 to October 5, 1 case
Prague September 14 to 21, 4 cases
Rotterdam September 21 to 28, 3 cases
St Petersburg September 7 to 14, 2 cases, 2 deaths
Tuxpan September 21 to 28, 2 deaths
Warsaw September 7 to 14, 1 death

CHOLERA

Hiogo August 16 to 29, 1,266 cases, 927 deaths
Osaka August 16 to 29, 1,361 cases, 1,101 deaths
Honolulu August 9 to September 8, 58 cases, 44 deaths
Singapore August 19 to September 2, 22 cases, 11 deaths
Tarnopol September 10 to 15, 18 cases, 3 deaths
Tarnopol Des't September 11 to 15, 2 cases, 1 death
Zbaraz September 6 to 14, 2 cases, 1 death
Proskurow and Letelschew Districts August 21 to 31, 101 cases, 45 deaths
Constantinople September 10 to 20, cholera reported
Mossoul September 14 cholera reported.
Morocco, September 14, 11 cases, 12 deaths
Bombay September 3 to 10, 1 death
Cognac September 21 to 28, 1 death
Yokohama August 23 to September 6, 27 cases, 19 deaths
Nagasaki September 4 to 10, 20 cases, 16 deaths

YELLOW FEVER

Mauronillo August 1 to 31, 23 deaths
Acapulco September 14 to 21, 1 case, 1 death
San Juan P R September 1 to 21, 22 cases, 6 deaths
Santiago de Cuba September 21 to 28, 19 deaths
Vera Cruz September 26 to October 3, 4 deaths

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[1] L'Union Medicale 1895, No 32

MISCELLANY

Treatment of Typhoid Fever.—Dr John Eliot Woodbridge, whose articles on typhoid fever have frequently appeared in the columns of the JOURNAL, has been in Chicago for the past two weeks, treating cases of typhoid fever in the hospitals of Chicago, and superintending the issue of his new book on the "Treatment of Typhoid Fever" which is now passing through the press

Exemption from Taxation of Farms used for Hospital Purposes—Farms bought and used for hospital purposes, as a part of the hospital plant, an open air sanitarium, and roaming ground for manageable and convalescent patients, very much as a playground might be used as an aid in the cure of sick children, the Supreme Court of Pennsylvania holds, in the case of Contributors to Pennsylvania Hospital v Delaware County, decided July 18, 1895, are exempt from taxation That they are also farmed for profit to reduce expenses, the court maintains, does not vary their position as part of the plant, though if there were any fair doubt of the good faith of such use, the case would be different Property which is not used directly for the purposes and in the operation of the charity, but for profit, is not exempt, and the devotion of the profit to the support of the charity will not alter the result It is, however, not material that such farms are separated from the main hospital building, and not used with it, nor that their use for hospital purposes is limited to the months of pleasant weather, in the summer and autumn

Successful Ligature of the Innominate Artery—A man was recently on exhibition in London whose innominate artery was tied by Mr Coppinger, at the Mater Misericordiæ Hospital in Dublin, in January, 1893 The operation was for the relif of aneurysm of the subclavian artery He was exhibited shortly after the operation in Dublin and later at Newcastle on-Tyne The man is 50 years of age and is in excellent health It is claimed for him that he is the only living example as yet exhibited in Europe of cure of subclavian aneurysm by innominate ligature —*N Y Med Record*

There is one case to our knowledge walking the streets of St Louis in perfect health whose innominate artery was successfully ligated in 1892 by Prof Waldo Briggs, of the St Louis College of Physicians and Surgeons —*St Louis Clinique*

Concerning the Action of the Diphtheria Antitoxin on the Kidneys and on the Heart—C V Kahlden (*Centralbl für Allg Path u Path Anat* Band vi, Nos 3 and 4) made the following experiments in order to determine whether or not the diphtheria antitoxin has any special effect upon the heart or upon the kidneys He injected guinea pigs and rabbits with very large quantities of serum as compared with the body weight of the animals and then after one or more injections the animals were killed and the kidneys and the heart muscle examined microscopically, after fixing and hardening according to the most approved methods There were no changes of any kind to be found, either in the kidneys or in the heart muscle V Kahlden is not prepared to say from the results of these experiments that the serum might not aggravate the morbid process often present in the kidneys of human diphtheric patients as the result of the elimination of the toxic products of the diphtheria bacillus, but direct anatomic evidence of such an effect is still lacking

All Massachusetts Cities Must Have Boards of Health.—The former Massachusetts statute providing that in each city, except Boston, in which a majority of the voters shall have so voted according to law, there shall be a board of health, consisting of the city physician and two persons, not members of the city council, whose term of office shall be two years, has been superseded by a new enactment which provides that in each city, except Boston, there shall be appointed by the mayor, subject to confirmation or rejection by the board of aldermen, except where other provision is made in the city charter, a board of health, consisting of three members, who shall hold office for the term of three years, one of whom shall be a doctor of medicine

Liability of Boards of Trustees in North Dakota—A law has been passed in North Dakota making any board of trustees, commissioners, directors, person or persons having the control or management of public institutions of the State, or having in any manner whatsoever the responsibility of disbursing or expending any money appropriated by the State, who, either directly or indirectly, expend or agree to expend, for the benefit of any institution or purpose, any amount in excess of the sum appropriated therefor, or who uses or transfers any appropriation to another purpose, conjointly and individually liable for all amounts so used or transferred, and forfeits his or their offices However, when an emergency arises requiring it, the Governor, Secretary of State and State Auditor may be appealed to, as a commission with power to authorize the transfer of money from one fund to another fund, of the same institution or purpose, or to authorize money therefor to be drawn from the State treasury Much the same end is sought to be reached in South Dakota by a somewhat different law

Changes Involving Massachusetts Town Boards of Health—Chapter 506, of the Acts of 1895, provides that every town in the commonwealth of Massachusetts may elect a board of health by ballot at the annual meeting of the town, or at a meeting legally warned for the purpose, consisting of three persons, to serve, one for the term of three years, one for the term of two years and one for the term of one year, beginning with the day following such town meeting or until their respective successors are chosen and qualified, and thereafter such town shall, at its annual town meeting, choose in the same manner one person who shall hold office for three years from the day following such town meeting or until another is chosen and qualified in his stead If no such board is chosen, the selectmen shall constitute such board of health So much of the Act of 1894 as provides that one member of the board of health shall be a physician, shall not apply to towns in which the selectmen constitute the board of health Those persons chosen by ballot and declared elected as members of the board of health of any town at its annual, or any special, town meeting prior to the passage of this Act, shall constitute the legal board of said town, notwithstanding any informalities or defects in the proceedings

Larvated Tuberculosis of the Tonsils—Dieulafoy (*La Semain Medicale*, 1895, p 199) injected pieces of human tonsils into guinea pigs Of sixty one animals so treated eight became tuberculous, i e, 13 per cent Of thirty-five animals inoculated with adenoid masses from the tonsils, seven became tuberculous, i e, 20 per cent From these results the author concludes that the various tonsils are the place of entrance for the tubercle bacilli in a considerable number of instances, and that the tuberculosis gradually spreads to the lymphatic vessels, the glands of the neck and then to the lungs In order that tubercle bacilli may lodge in the tissue of the tonsils only a small lesion of the epithelium would be necessary, and such lesions are certainly present often enough

Fat Embolism after Forcible Flexion of Both Knee-Joints—F Colley (*Dtsche Zeitschrift f Chir*, Bd 36) describes a very unique case of extensive fat embolism following *brisement forcé* of both knee joints without injury to the bones The patient, a 24-year-old girl, died twenty-four hours after the operation The fat embolism was very marked in the lungs the brain, the kidneys, and especially in the heart muscle In the heart there was a focal fatty degeneration of the muscular fibers around the capillaries that were filled with fat. This myocardial degeneration undoubtedly played a principal part in bringing about the fatal termination The source of the fat embolism was, undoubtedly, the markedly fatty vasti muscles of the thigh, which were lacerated during the operation

"Malignant" Lymphoma—Fischer (*Deutsche Zeitschrift f. Chirurgie*, Bd 36) describes two cases of malignant lymphoma with the post-mortem findings In the first case there were lymphomatous formations in the internal organs but no tuberculosis or suppuration Clinically, this case was marked by periodic attacks of fever lasting ten to twenty-one days with free intervals of about the same length Fischer showed that this fever depended on infection with the staphylococcus pyogenes which was present in the blood and the lymphatic gland juice during the period of pyrexia, but absent in the intervals of normal temperature Post-mortem, no microörganisms were found in the glands In the second case there was an extensive lymphomatous growth in the neck, in the axillæ and in the inguinal regions with tuberculous ulcers of the intestine, tuberculosis of the bronchial glands and of the lungs but the cervical lymph glands showed no bacilli, and no histologic changes characteristic of tuberculosis Inoculation with pieces of the gland into the peritoneal cavity of pigs was not followed by the development of tuberculosis and, consequently, Fischer regards the tuberculous lesions in this case as the result of an infection independent of the lymphoma

Football Casualties —A serious casualty has already been reported as a file-leader for the series of football accidents in the season of 1895–96 An animated contest on a New Jersey field resulted in the laying up of a junior player He was tripped while running, and was fallen upon heavily by a number of other players, his ankle and two or three ribs were fractured His ultimate recovery is expected A dislocation of the femur was treated in Professor Hamilton's clinic, Chicago October 12 The patient belonged to the team of one of the high schools on the West Side A press dispatch reports the death of a football player from an accident received while playing at a western college

The Index Medicus —The following circular has been issued

PHILADELPHIA, Oct 1, 1895

Dear Doctor —The *Index Medicus*, as you doubtless know, has ceased to exist, because the number of subscribers was not sufficient to pay for its publication Its value was so great that the undersigned, a self constituted committee, have concluded to appeal to the literary workers of the medical profession to unite in reviving it The nature of the *Index* is such that it can never obtain a large subscription list, but it is invaluable to those engaged in literary research It will require about $5,000 annually to publish it The former editors are willing to take up the work again if 200 subscribers at $25 per year can be obtained We have each agreed to subscribe for a period of five years, will you not do likewise, and mail accompanying blank, duly signed, to the Secretary of the Committee? If the term seems too long, will you not fill in the blank for three or less years? The Committee also begs you to get as many of your friends as possible to subscribe, and to send to the Secretary the names of any persons, society or library likely to become a subscriber Yours truly,

WILLIAM PEPPER, J WM WHITE,
S WEIR MITCHELL W W KEEN
H A HARE, GEO M GOULD,
DEF WILLARD, JOHN H PACKARD,
J C WILSON, E LAPLACE,
H C WOOD,
1627 Walnut Street JOHN B ROBERTS, Secretary

Influence of Season on Insanity —Dr Forbes Winslow has furnished the New York *World* a popular article on insanity in women, in the course of which he discusses "the influence which the seasons exert in producing insanity in females" Analyzing the statistics of a large hospital for a period of twenty-two years, during which a total of nearly 5,000 patients—2,955 females and 2,019 males—were treated, it is shown that during the first quarter of the year—the months of January, February and March—the number of females received amounted to 649 In the second quarter of the year—April, May and June—842 were admitted In the third quarter—July, August and September—798 was the number, and in the last quarter—October, November and December—the admission of insane women amounted to 668 It is seen, therefore, that a much larger number of insane women were admitted during the second and third quarters —in spring and summer—than in any other period of the year On the other hand, most cures were effected in the fourth quarter, while most deaths occurred in the first quarter of the year On an analysis of each month taken individually, the greatest number of female curable lunatics were admitted in May and the smallest in January Less females were discharged cured during the early part of the year than in any other part of it, and most deaths occurred in the months of January February and March and the least in April May and June From these data Dr Winslow says "We may rationally conclude that, as the temperature of the weather diminishes and the year draws to a close, so may we form a more favorable opinion respecting the prognosis in cases of insanity in women On the other hand, seeing that insanity is so much more prevalent in summer than in winter every exciting cause, whether physical or moral, ought to be carefully guarded against in the former season, especially in those women who are in any way liable to, or in whom has been developed any previous attack"

The Allen Medical Library —In answer to a correspondent, we have to say that books and pamphlets intended for the Allen Medical Library should be sent in care of the Presbyterian Hospital, Chicago

The library was donated about ten years since by the late Prof J Adams Allen, of Rush Medical College, and the Superintendent, Dr Stehman, was designated as the Librarian It has by reason of the additions to the original collection, grown to be a fairly comprehensive medical library, and is of considerable value No printed catalogue has been issued

Suppression of Urine After Operation—Saline Injection—Recovery —Dr Charles McBurney has reported to the New York Surgical Society a case of the above nature that was successfully treated by saline infusion This case has been published in the August issue of the *Annals of Surgery* The operation was for the removal of a large calculus from the right kidney, in a male patient aged 50 years The saline infusion that appeared to reëstablish the renal function was in quantity about one quart, and was injected into a vein in the arm The following is a part of the report 'The operation of the kidney was attended with only moderate bleeding, no ligature and no packing was required for its control In the course of the twenty-four hours next following the operation nausea began and was soon followed by vomiting, headache, and symptoms of uremic intoxication There was no voluntary discharge of urine, and only one half ounce was obtained by catheter during the first twenty-four hours after the operation The saline infusion, above referred to, was followed in the course of a few hours by the discharge of thirty-five ounces of urine The patient thereafter steadily recovered In the discussion of this case that followed, reference was made to a case of total suppression of urine after an operation for gangrenous hernia, in which striking improvement had followed similar treatment It was also called to mind that Dr Howship Dickinson had in the *British Medical Journal* called attention to the fact that patients could be aroused from diabetic coma in a few minutes by saline infusion

Some Centenarians and Others —Dr Charles E Rice, of Alliance, Ohio, held his second annual old folks' reception at his residence in that city on the 27th ult, at which were four centenarians—all women, by the way—and some eighty other guests whose ages ranged from 72 to 103 years Mrs Elizabeth Byers, aged 103, drove twenty-four miles in a buggy to attend the party, and brought and used the spinning-wheel that she has owned for eighty years Mrs Priscilla Spooner, the next in wealth of years, was *born in Duxbury, Mass*, Dec 11, 1793, the daughter of Capt Judah Delano Mrs Catherine Hoobler, born in Loudon County, Va., in 1794, is the great-great-grand aunt of Dr Rice Mrs Letitia L Walker was born near Shippensburg, Pa., *in* 1795 There were also present among the women one each aged 97, 95, 94

91, 88, 87, 84 and 83 years, and two each aged 89 and 86 years The oldest man was 99, and there were one each aged 96, 94, 93, 91, 88, 87, 86, 84 and 82 years, two aged 92 years and three aged 90 years each The aggregate ages of the sixteen women—83 to 103 years—was 1,475 years, being an average of 92 2 years each, the aggregate ages of the fifteen men—82 to 99—was 1,354 years, being an average of 90 3 years each Obviously the New Woman is not enjoying a monopoly of superiority over masculinity Elizabeth and William Ware, aged respectively 91 and 90 years, have been married more than sixty years and were the oldest married couple present, and the oldest physicians were Drs Josiah Beebout, 92, and John P Gruwell, 86 years The oldest soldier was James R Green, born in Bolton, England, in 1796, who addressed the students of Mount Union College in his ninety-ninth year, on the 18th of June last, the eightieth anniversary of the battle of Waterloo, in which he participated Mrs Nancy McKinley, aged 86, mother of ex-Gov William McKinley, was also present

Neuralgia Cured by Resection of the Eighth Cervical—Mm Chipault and Demoulin report a very interesting cure of cervical neuralgia A man of 38, otherwise in good condition, had for four years suffered from a continuous pain localized in the little finger and inner part of the hand, with exacerbations shooting along the inner border of the forearm He had been submitted to all sorts of remedial measures without relief, among others, stretching the dorsal cutaneous branch of the ulnar and section of the same in the epitrochlear fossa When he came under the author's observation examination showed that the hyperesthetic zone comprised the inner surface of the little finger with the corresponding part of the hand and two strips on the arm and forearm, one and one-half centimeters wide—one anterior, the other posterior From the researches of one of the authors it is proved this is the exact area of cutaneous innervation from the eighth cervical It was therefore decided to open the spinal canal After resection of the vertebræ nothing abnormal was found in the spinal canal nor in the intervertebral foramina The dura was then laid open and the posterior root of the right eighth cervical with the nerve above and below, was resected between the ganglion and the cord These adjacent nerves were resected also, because physiology teaches that section of a single root is insufficient to anesthetize its territory Two hours after the operation the zones of hyperesthesia and spontaneous pains had disappeared The patient was able to use his hand for eating soup and for writing, which had been impossible for years on account of pain Four months after the operation the recovery still persists with no consecutive trophic troubles On the contrary, those remaining after the resection of the ulnar nerve have disappeared Some interesting physiologic manifestations were noticed during and after the operation, among them—electrical stimulation of the posterior roots produced a manifest vaso constriction in their territory The resection of these three roots caused only a slight hyperesthesia of the arm, which disappeared in twenty-four hours[1]

Bacterial Examinations of the Throat in Fevers other than Diphtheria—At the London Fever Hospital, Dr J O Symes, an assistant medical officer, has for a year made examinations of the throat in all cases admitted to that hospital, wherein an exudate was seen in the fauces, and the summary of his finding is given in the London *Lancet* for August 24

"Cultivations have also been made from time to time from throats presenting no abnormal appearances As a rule, the cultures were taken upon admission, but some after a stay of from two to eight weeks in the wards A sterilized swab of cotton wool upon a rod was passed lightly over the fauces and tubes of blood serum inoculated from this The publication of a brief summary of the notes of the first 100 cases so examined may be of interest at the present time, in view of the increased attention paid to the bacteriology Bacteriologic examinations were made of exudations from the throats of 68 patients suffering from scarlet fever, 52 were made on the day of admission, 8 during the first seven days, and 8 at periods varying from the third to the eighth week Of these cultivations 14 showed pure streptococci, 25 streptococci and cocci in groups, 2 cocci in groups, 1 cocci and the long variety of diphtheria bacillus, 9 cocci and the short variety of diphtheria bacillus, 14 cocci and other forms of bacilli and 3 showed various forms of bacilli only The bacillus most frequently found was a short stout variety with a central non-staining portion It was arranged in chains or groups, and liquefied serum in from three to six days"

The case of scarlet fever in which the long variety of diphtheria bacillus was found made a good recovery, and was not attended by any paralysis In one of the short bacillus cases there was a paresis, also anesthesia of the palate Certain cases, 8 in number, that were sent to the hospital, certified to as diphtheria, were not found to develop the Klebs-Loffler bacillus, assumed the characteristics of scarlet fever or tonsillitis, one case which had much faucial exudation proved to have a well-marked attack of typhoid fever Fourteen cases of measles, some of which had exudate in throat, were cultivated Colonies of the short bacillus were found in 7 cases Pure cultures were not virulent to guinea pigs The long variety was found in none of these cases In 18 cases admitted as diphtheria, the long variety of bacillus was found in 10, in one case there were colonies of the long and short varieties The short bacilli were demonstrated as present in the throat twelve weeks after admission A pure culture of the latter was not virulent to the guinea pig In one case the long bacilli were present in the sixth week, this being the longest period of the persistence of this variety that was noted by Dr Symes

Relations between Malignant Tumors and Traumatism—Ziegler of Munich, assistant in Angerer's clinic, has published an interesting paper in which he seeks to determine if traumatism is one of the factors in the etiology of malignant growths He divides his cases into *a*, carcinomata and *b*, sarcomata *A*, carcinomata 328 cases were observed, 117 in males, 211 in females In fifty-five cases there was a history of traumatism and in ninety-two cases a history of chronic irritation As regards mammary carcinoma in females, which numbered 170 cases, 37 had a traumatic history The following table gives the results of other investigations

Estlander	59	cases,	trauma	15
Snow	143	"	"	32
Bihler	40	"	"	8
Henry	146	"	"	15
Rapok	89	"	"	13
Sprengel	131	"	"	19
S Wolff	108	"	"	10
Horner	158	"	"	14
Oldecop	250	"	"	18
Winiwarter	170	"	"	12
Schulthess	58	"	"	2
Fischer	63	"	"	1

The influence of traumatism on the development of carcinoma of the lips appears clear Thus, of forty-four tumors occupying this region, forty-two were situated on the upper lip and only two on the lower, on the other hand, thirty-five occurred in men and only seven in women Traumatism is more frequent in the upper than in the lower lip, and men are manifestly more exposed In this respect the statistics of other authorities corroborate those of Ziegler Concerning the influence of antecedent traumatism on other regions, it seems less clear for other parts of the head—buccal cavity, maxillary region, parotid, etc, on the other hand, it seems that phimosis and the irritations resulting from it play a certain rôle in the development of carcinoma of the penis Of nine carcinomas of the limbs, all developed under the apparent influence of a chronic state of irritation In this connection the author recalls Volkmann's statistics—228 cases of carcinomatous tumors of the limbs, 98 of which developed as a result of a chronic inflammation of the skin, 32 from ancient fistulas, 11 in connection with congenital warts and 12 with acquired warts *B* Sarcomata Of 171 cases of sarcomatous tumors, 81 occurred in men, 90 in women

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[1] L'Union Medicale, 1895, No 82

There was a history of traumatism in thirty-five cases, and of chronic irritation in thirty two cases. Thus, of 400 cases of carcinomatous and sarcomatous tumors, in 90 there was a history of antecedent traumatism and in 124 of chronic irritation. Ziegler is of opinion that the results of his inquiries prove indisputably that traumatism is a factor in the etiology of malignant neoplasms.[1]

Increase of Venereal Disease in the British Army.—In the *Lancet*, June 29 appears a statement concerning an apparent increase of venereal disease in the British army, due to the abolition of the acts known as the Contagious Diseases Acts. The *Lancet* takes for its text a communication which was read at a meeting of the Académie de Médecine in Paris on May 21 last by Dr. Commenge. The documents furnished in England by the Minister of War, said the speaker, have brought the gravity of the case into prominent relief. In 1892, out of 196,336 soldiers 52,155—that is to say, *upward of a quarter of the entire British army*—were admitted to hospital on account of venereal disease.

"In the opinion of the majority of army medical men this extraordinary development of the venereal diseases is with justice to be ascribed to the abolition of the Contagious Diseases Acts, and even the late Dr. Graham Balfour, who was for a time opposed to the regulation of prostitution, changed his views on this point. It will be interesting to draw a comparison, continued Dr. Commenge, between the existing state of affairs in England, where prostitution is free, and that obtaining in France, where, happily, some proscriptive measures still remain in force. In 1875, the year that venereal diseases were most prevalent in the French army, the number of cases was equal to 74.5 per 1,000 of strength, during the same year in England the proportion was 139.4 per 1,000. The highest rate in the British army is referable to the year 1885, and amounts to 274.4 per 1,000, in the French army that year the numbers yield 52.1 per 1,000 only. When we examine the returns in order to ascertain the prevalence of syphilis, the following are the results: in the French army the worst year for syphilis was 1875 when the proportion of cases was 11.3 per 1,000 of strength. In the British army during the same year it was 28.8 per 1,000, and in 1887, when the highest ratio was reached, it was 46.6 per 1,000. In France during the latter year the syphilitic rate was only 8.9 per 1,000. Dr. Commenge has, moreover, made a study of the sanitary condition of the Russian army, where venereal affections maintain about the same level that they do in the French army, save that syphilis is slightly more prevalent. Needless to say, prostitution in Russia is under the control of the authorities. The relative prevalence of venereal disease in the three armies is shown in the subjoined table, the figures giving the cases per 1,000 of strength.

	England	France	Russia.
1889	217.1	45.8	40.7
1890	212.4	48.8	48.0
1891	197.1	48.7	41.5
1892	201.1	44.0	44.6

"The following table shows the comparative prevalence of syphilis alone.

	England	France	Russia
1889	85.7	9.1	12.9
1890	87.8	9.1	18.4
1891	82.2	8.9	12.2
1892	83.8	9.2	18.7

"Dr. Commenge next extended his investigations in order to determine the sick rate in the several divisions of the French army, and found that the incidence of venereal disease was largely influenced by the presence or absence of clandestine prostitution in the various garrison towns. Paris, Algeria and 'the Midi' were notorious centers of illicit intercourse and it was in these districts that the venereal rate invariably attained its maximum. Dr. Commenge brought forward a formidable array of facts and figures in support of his thesis, which was pronounced to be an eminently interesting and instructive work. His conclusions are three in number. 1, venereal diseases are always far more numerous in countries where there is free trade in prostitution than in those where regulations are in force, 2. the regulation of prostitution serves to attenuate the virulence of the venereal diseases and to hinder their progress, 3, the results now adduced are in accordance with the resolutions of the Académie de Médecine voted in 1888, when the attention of the authorities was drawn to the dangers of prostitution and to the necessity for safeguarding the public health."

Philadelphia Notes.

Dr. Thomas J. Mays on the 9th inst. read a paper before the County Medical Society "On the Local Application of Ice in Acute Pneumonia," which was the second collective report upon this subject presented by him to this Society. In June, 1894, he had given the statistics of 50 cases and the present paper brings up the total to 195 cases. Among this number there were seven deaths—four male, three female, a mortality rate of 3.58 per cent. The cases ranged from three weeks to 75 years of age. Sex was noted in 143 cases, of which 67 were males and 76 females, which is contrary to the general observation. There were 108 cases of single, and 31 cases of double pneumonia (or about 30 per cent.), these furnished three out of the seven deaths (over 40 per cent.). The results of the ice treatment were very obvious: 1, in relieving pain, 2, reducing pyrexia, 3, alleviating symptoms, 4, shortening the course of the disease and hastening the day of the crisis, 5, lowering mortality rate, and 6, increasing the patient's comfort. The results of the ice bag treatment, as compared with other methods, were pronounced to be infinitely more satisfactory than the latter. In more than 15 per cent. of the cases, the crisis appeared on the second day, and in 53 per cent., it occurred on the fifth day. The symptoms of pneumonia are regarded by Dr. Mays as expressions of a disorder of the nervous system through the vasomotor nerves. In this connection Hughlings Jackson's remark that he regarded acute pneumonia "as a form of herpes zoster of the pneumogastric nerves" was quoted, as well as Fernet's statement, that "so called fibrinous pneumonia is a herpes of the lungs." In addition to the application of the ice bag (almost constantly, or with brief remissions) Dr. Mays gives strychnin to sustain the heat and pulmonary innervation, digitalis, morphin and brandy, and resorts to oxygen inhalations, strapping of chest in case of pleuritic pains and an ice bag to head to diminish restlessness.

Dr. M. V. Ball at the same meeting reported 'A Case of Acute Cocain Poisoning." A woman, 35 years of age, swallowed 25 ccm. of a 5 per cent. solution, equal to about 1¼ gm. (18½ grains) of the alkaloid. Intoxication, restlessness and delirium of a maniacal character rapidly supervened. The mouth and throat were dry, the pupils dilated, the teeth gritted in a tetanoid manner, and she talked incessantly. Pulse 140, temperature normal, no general anesthesia. Morphin hypodermically, black coffee, and afterward strychnin were given by the mouth, also alcoholic stimulants. Two hours after onset of symptoms, the patient was quieter, pulse stronger but still rapid. On attempting to walk, legs were found to be almost useless, the symptoms gradually passed off. The fact that the patient had been accustomed to using cocain for a painful disease of the rectum, may have had something to do with the recovery. On a previous occasion she had, by mistake, taken a poisonous quantity of the alkaloid in a dry state, followed by active delirium, and recovery under the free use of morphin.

Dr. Harrison Allen, at the October meeting of the Laryngological and Otological Section of the College of Physicians, made some remarks upon the anatomy of the temporal bone. He doubted the propriety of the ordinary division into squamous, petrous and mastoid portions and said that the latter portion has a smaller extent and a less consequence than is usually stated in the text-books. The squamous portion extends behind the auditory opening and occupies the anterior third of the so-called mastoid portion. Thus we have (in relation to the auditory canal), a pre-squamous, and a post-squamous, the post-squamous containing the large air-cells and frequently contains all that are in this region having the mastoid portion dense, like the remaining part of the petrosal division. A line of suture can usually be traced on the outer surface of the mastoid, which divides it in front from the post-squamous portion. For the portion surrounding the internal ear, Dr. Allen proposes the name of peri otic so as to make it uniform with the nomenclature of comparative anatomy. The upper portion of the peri otic portion, on its external surface presents some irregular markings produced by blood vessels, and for this locality the name "serpiginous portion" of the peri otic temporal bone is proposed. One point of interest from a clinical standpoint is that operators are requested to examine their cases closely and to state whether the abscess or operation in this region is entirely anterior or posterior to the squamos peri otic suture, in the interest of accuracy of definition.

Dr. Oscar H. Allis, at the Academy of Surgery meeting on the 7th inst, reported a case of gastro enterostomy for malignant disease, in which a Murphy's button was retained in the stomach for sixteen months and was found there at the autopsy, it having occasioned no special symptoms during life

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[1] La Medicine Internationale, 1895, No. 7.

THE MEDICAL CLUB tendered a reception to Prof Wm H Welch, of the Johns Hopkins University, on the 16th inst, at the Hotel Bellevue, which was largely attended by the leading members of the profession of this city and vicinity

PROF J M DACOSTA has returned from Europe entirely recovered from the effects of former illness and now in excellent health The eighth edition of his work on "Diagnosis" has just been issued He resumes his clinical lectures at the Pennsylvania Hospital on November 1

THE RUSH HOSPITAL FOR CONSUMPTIVES has removed to 33d Street, above Lancaster Avenue, the new hospital being opened with a high tea by the Woman's Board The site was purchased some time ago, and is admirably suited for the purpose, being on high ground and with abundant open spaces around it It will be extended as funds are accumulated, one wing to be built at a time

Society Notes

DETROIT MEDICAL AND LIBRARY ASSOCIATION —The annual meeting of this Society was held Monday evening, October 7 The following officers were elected for the ensuing year President, Ernest T Tappey, Vice-President, Chas W Hitchcock, Secretary, Willis S Anderson, Treasurer, Anderson P Biddle After the business session the retiring President, Dr Eugene Smith, tendered a reception to the members

AT THE first annual meeting of the Utah State Medical Society the following officers were elected President, Walter R Pike, Provo, First Vice-President, G W Perkins, Ogden, Second Vice-President, J S Richards, of Salt Lake, Secretary, J N Harrison, Salt Lake ——The annual meeting of the Cedar Valley Medical Society was held October 8, at Waterloo, Iowa The following officers were elected for the ensuing year President, Amos G Shellito, Independence, Vice-President, J F Cole, Oelwein, Secretary, W B Small, Waterloo The next meeting will be held in Dubuque —— The regular semi-annual meeting of the Upper Cumberland Medical Society was held at Cookeville October 2 The semi annual election of officers resulted as follows President, J L Jones, New Middleton, Vice President, J F Dyer, Cookeville, Secretary, W J Breeding, Sparta, Treasurer, L R McClain, Cookeville ——The regular quarterly meeting of the Clinton County Medical Society was held at Clinton, Iowa, October 1 ——The Miami Medical Association held its sixty sixth annual session at Lockland, Ohio, October 8 Papers were read by Drs R T Trimble, New Vienna, Arthur L Knight, Madisonville, J M Scholler, E G Zinke, R B Hall, W H Taylor, J J Bonar, J C Oliver and B P Goode, Cincinnati, Percy M Ashburn, Batavia, and B H Blair, Lebanon ——The Northwestern Wisconsin Medical Association held its quarterly meeting at Wausau, Wis, October 8 ——The Eastern Kansas Medical Society met in Topeka, October 8

Louisville Notes

ACADEMY OF MEDICINE —The regular meeting of this society was held in their rooms Monday, October 14 Dr R A Bates read the paper of the evening on "Hypertrophic Cirrhosis of the Liver" The discussion was opened by Drs J B Marvin, F C Wilson, and John Barbour

PHYSICIAN'S WITNESS FEES —Judge Toney, in the Law and Equity Court, decided a disputed point which is of interest to all physicians In a damage suit, Dr B F Atchison was summoned as a witness for the plaintiff He was not present when the case was called and the plaintiff refused to go into the trial without him, requesting an attachment returnable forthwith The court refused to issue the attachment, and the plaintiff then had the case dismissed without prejudice Judge Toney said the plaintiff had not agreed to pay the physician's fees and expenses, and therefore could not force him to appear in court, although he had been subpœnaed He said the law on this subject is an old one, although it had never been enforced To compel the attendance of a physician it is first necessary for the party desiring his evidence to pay his fees and costs, and Judge Toney said that he would compel no physician to attend his court under any other circumstances

WITHERSPOON —Central Kentucky has sustained a great loss by the death of one of the most prominent younger physicians of that section Dr John T Witherspoon has been ill for several weeks of typhoid fever, at his home in Lawrenceburg, in the heart of the blue grass section, his illness assumed a grave aspect a few days ago and he died October 11 He was in his twenty-fifth year, was graduated from the University of Louisville, in 1892, and was the son of Louis Witherspoon, President of the Anderson Deposit Bank He was prominent in local masonry, by which order he was buried

St Louis Notes

THE ST LOUIS MEDICAL SOCIETY —At the meeting of October 12, the discussion of the application of the toxin of erysipelas in the treatment of sarcoma, was the feature of the evening, the subject having been introduced by Dr George Halley of Kansas City

THE ST LOUIS CHILDREN'S HOSPITAL —A bequest of $6,000 made by the late Robert A Barnes to this institution, is now about to come into the hands of the hospital authorities as a result of an amicable suit A change in the name of the institution and the death of the trustee named in the will of Mr Barnes were the cause of delay in the delivery of the funds

THE REBEKAH HOSPITAL TRAINING SCHOOL FOR NURSES will hold its second Commencement October 22

DIPHTHERIA —The teachers in the public schools are now required to send home all children manifesting any symptoms of sore throat The energetic efforts of the Board of Health to restrict the spread of diphtheria are thus receiving coöperation, and success seems more and more assured

MARION-SIMS COLLEGE OF MEDICINE —The dental department of this college has opened its second year with forty two students

THE WOMAN'S MEDICAL COLLEGE has begun the college year with greatly increased facilities The new regulations of the State Board of Health caused the rejection of eight applicants for admission, but this has had no effect on the prosperity of the college

DR CHARLES FINLEY HERSMAN died October 11, of nephritis At the time of his death he was professor of clinical medicine in the Missouri Medical College Dr Hersman was justly esteemed one of the most brilliant and promising of the younger members of the profession of St Louis His advancement had been rapid and was due entirely to his learning and practical attainments His career, characterized throughout by the greatest modesty, is the more remarkable from the fact that he was but too well aware that he was suffering with an incurable chronic malady which would certainly prevent the fruition of his labors He had undertaken a large increase of clinical work which probably had some influence in hastening his death He will be sadly missed by his colleagues in the faculty

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S Army, from October 4, 1895, to October 10 1895

PROMOTION

Major William E Waters, Surgeon, to be Deputy Surgeon General with rank of Lieutenant Colonel Oct 1, 1895, vice Billings, retired

Capt Louis S Tesson, Asst Surgeon, to be Surgeon with the rank of Major Sept 26 1895, vice Matthews, retired

Capt Edwin F Gardner, Asst Surgeon, to be Surgeon with the rank of Major, Oct 1, 1895, vice Waters, promoted

LETTERS RECEIVED

Anderson, W S, Detroit Mich
Bernd & Co Henry, St Louis, Mo Brown, Francis H, Boston, Mass
Cook, S E, Lincoln, Neb Chatterton, W W A, Lake City, Iowa
Davis, John L, Cincinnati Ohio
Girard, A C, Fort Sheridan, Greene F C, Chicago, Ill
Hektoen L W, Chicago Ill, Hall, Geo W, Chicago, Ill, Holmes, Bayard, Chicago Ill, Heuel Emil, New York City, N Y
Instant Cut Off Co, Port Huron Mich
Jackson, Edward, Denver, Colo Jones, Rising City, Neb
Kane, Evan O'Neil Kane, Pa Kingsley, B F, San Antonio, Texas, Keating John W, Ann Arbor Mich
Lord & Thomas, Chicago, Ill
McDill J R, (2) Milwaukee, Wis Merck & Co, New York City N Y
Millard, P H, Minneapolis Minn
Peterson, Fred'k, New York City, N Y
Roberts, John B, Philadelphia, Pa
Spencer Geo A, Haverhill, Mass Stuart, J H, Minneapolis, Minn
Woodbridge, John Eliot Chicago, Ill, Whitford, Wm, Chicago, Ill, Watkins, W W, Moscow, Idaho
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ADDRESS

INTRODUCTORY ADDRESS

Delivered September 30 at the College Building, Georgetown University, District of Columbia

BY GEORGE M STERNBERG, M D
SURGEON GENERAL U S ARMY
WASHINGTON, D C

Ladies and Gentlemen —The Faculty of the Medical Department of Georgetown University has decided upon a new departure in medical teaching in the District of Columbia, and by their invitation I am here to deliver an address upon an occasion which they very properly consider to be one of unusual interest to the medical profession and to the citizens generally in this great and rapidly growing capital city Heretofore the courses of instruction have been so arranged that students who are occupied, during the official hours, in the various government offices located in this city could take advantage of them This has no doubt made it possible for many industrious and deserving men to obtain the degree of Doctor of Medicine who would otherwise have been unable to do so And I presume that a fair proportion of those who have pursued their medical studies under these circumstances have become successful practitioners of medicine, while others have been satisfied with the title of Doctor, and have, wisely perhaps, held on to the salaried position which enabled them to secure their medical degree While this system has no doubt been advantageous to many worthy young men, and has supplied the ranks of the profession with a certain number of well qualified practitioners who have risen to prominence in their chosen profession, it is generally admitted that it does not give the best possible results There is something to be said, however, for the class of men who have taken advantage of it The fact that they have been able to secure a government position may be taken as evidence that their English education is better than that of very many of those who obtain a medical degree elsewhere, and their industry is made evident by the fact that they are able to pass creditable examinations at the end of their course, although the best part of each day is, or should be, spent in the more or less exacting duties for which they receive a salary from the government

My experience as a member of Army Medical Examining Boards leads me to the conclusion that very many of those who receive degrees from medical colleges, in all parts of the country, would utterly fail to pass the civil service examination required of clerks in the government service The mistakes in orthography, grammar and literary style made by a considerable number of the candidates for admission to the Medical Corps of the Army are lamentable and sometimes amusing It is said that a Navy examining board on one occasion rejected a candidate for spelling Philadelphia with a small f Certainly no amount of medical knowledge, at the present day, will enable an illiterate man to maintain the respect and confidence of educated people The man with a defective medical education may impose upon his non-professional fellow citizens, and if he has an agreeable address and an elastic conscience may become a successful practitioner—if success is to be measured by the number of his patients and the extent of his income But a defective English education is something that reveals itself, sooner or later, to the educated classes, among whom a physician with a reasonable degree of ambition and self esteem would naturally hope to practice

A recent editorial in a leading medical journal (*The Medical News*) refers to the importance of correct English orthography as follows "There can be no question that men have shown ability to do good intellectual and social work of undoubted value to civilization who could not spell ten words correctly But, and here's the rub, that day is either past or should be past It is by every one admitted, and by none more fully than by the combined good physician and poor speller, that without the preliminary education, evidenced at least by correct spelling of one's native language, the modern physician is now and henceforth not only handicapped, but utterly outclassed in the race of life It is not that knowledge of spelling will make one the better physician, but the lack of that knowledge certainly gaurantees other lacks that squarely debar from the higher education essential at this day It has been said that without money, or a certain amount of it, one can not get what money alone can not buy, and it is much the same with preliminary education "

The editor appends to his article a list of 120 misspelled words which he says, "is culled with exact spelling from the papers of those examined by the Board of Medical Examiners representing the State Medical Society of Pennsylvania " I select a few examples from the list given Apatite, Assleep, Alsow, Boath, Fatial (facial) Hedacke, Jerms, Ulser (ulcer), Sudent (sudden), Skinn (skin), Sower (sour) Comment is unnecessary, but we may remark that the examiner who furnished the list referred to, to the editor of the *Medical News*, says that "some of these gentlemen were graduated this year by medical colleges in Philadelphia "

This illiteracy of graduates in medicine is not limited to any section of the United States, and a presidential address recently delivered by a distinguished English physician indicates that the evil is not limited to this country W Mitchell Banks, M D, F R C S, in his address as President of the Lancashire and Cheshire Branch of the British Medical Association, has discussed the subject of "Overcrowding in the Medical Profession and its Remedy " His remarks are so pertinent, and apply so well to conditions existing in this country, that I shall take the liberty of quoting at some length from his address

"Many circumstances have contributed to this overcrowding In former days a man of good family and social rank, but whose fortune was not very great while his children were numerous, could often find places for a son or two in the Church or in the Army, through the influence of powerful friends But the days of interest are gone, and these avenues are closed now As for the bar, the numbers of the briefless seem ever on the increase, while legal proceedings are actually diminishing in number In business, the quiet old trading days are done, and there is nothing but hurry and conflict and cheating and risk So that the merchant sees in medicine, a comfortable sphere of life, where a living can usually be made by any sober and industrious man Thus the great medical schools have been pouring out a deluge of young practitioners, which has overwhelmed the land"

After speaking of the demoralizing effects of the overcrowding of the profession, among those who are pushed to the wall on account of educational or social disadvantages, and of the ignoble methods often resorted to by graduates in medicine in order to keep the wolf from the door, Dr Banks proceeds to speak of the remedy for this condition of affairs, as follows

"The finest thing that has been done for the profession for many a long year was the enforcement of the five years' curriculum, and its effect in diminishing the numbers at some of the gigantic doctor factories has already been quite pronounced

"Well, then, you ask, what is my remedy? My remedy consists simply in stiffening up the entrance examinations I hold that there ought to be a rough sieve supplied at the very beginning, and that all who can not get through this sieve should be cast on one side As things stand at present, any man who gets through an entrance examination will ultimately get a qualification of some kind, which enables him to put "Doctor" on his door-plate, with just as much effect as a graduate in honors of the London University You can not hinder him from this by any amount of scientific or professional examinations He will rub through these, bit by bit y teacher of experience will tell you how futile it to attempt to turn back a man who has once ssed an entrance examination, if that man is dеermined to go on Beside, it seems to me unfair to allow an inferior man to enter upon a course of professional studies for which he is obviously unfitted He ought not to be allowed to get so far He should be turned back at the very commencement, and not encouraged to throw away years on unavailing work

"I have said that I consider the subjects of a medical education and the examinations therein to be amply sufficient if they are only properly kept up to the mark by due inspection But I do not admit this with regard to the entrance examinations These vary in the most remarkable manner, both as to subjects and the severity of examinations I have not been teaching students for nearly thirty years without knowing what I am talking about, and I say that there are in the profession at this moment, an enormous number of men whose general education is of the lowest type, and who never could have got into it if the entrance examinations had been of a proper standard Ask any examiner of experience what he thinks of the English of the papers he has to read, and he will tell you that it is often lamentable—spelling, punctuation and composition being simply set at naught

"Again, some six years ago, the Secretary of War sent a letter to the General Medical Council, complaining of the want of knowledge of their own language shown by candidates for places in the Army medical service I heard this letter read, and I never felt so ashamed of my profession in my life It seemed to me a most ignominious thing for us, that even soldiers should point the finger of scorn at us in the matters of general education"

Without doubt the remedy proposed by Dr Banks should be applied for the relief of a similar condition of affairs in our own country Uneducated men should not be admitted to our medical colleges as candidates for the degree of Doctor of Medicine The graduate who is deficient in knowledge of medicine may make good this deficiency before he is overburdened with practice, and if he has made no mistake in selecting his vocation will not fail to do so But the man whose early education has been neglected rarely overcomes this defect

As to the extent of the requirements at the examination for entering upon the study of medicine, I am not disposed to be as exacting as some would be A sound English education, such as may be obtained at the higher schools in our principal cities, and a sufficient knowledge of Latin for correct prescription writing, is all that we demand of candidates for the Medical Corps of the Army and, in my judgment, is all that should be required of the young man who desires to enter upon the study of medicine Certainly, this is not asking too much, in view of the fact that a considerable proportion of the recent graduates of medical colleges in this country are rejected by Army and Navy examining boards on account of their deficient knowledge of English grammar and orthography Steps have already been taken in some of the States to remedy this deplorable condition of affairs, by means of legislation regulating the entrance examinations In New York these examinations are now made under the direction of the Regents of the State University It is evidently a step in advance to make them independent of the colleges, and uniform as to standard

I must not dwell longer upon this topic, the importance of which no one will be inclined to deny, and will proceed to consider the reasons which have induced the Faculty of the Medical Department of Georgetown University to make a change in the hours devoted to instruction, and to extend the course of instruction to four terms of seven months each

In the Announcement for the present year the reasons for this change are stated as follows

"The demands of modern medical education are such that the faculty has found it necessary to extend the hours of instruction so that more time may be given to practical work in laboratories and hospitals"

Here we have a recognition of the fact that the graduate in medicine requires something which he can not get from medical books or lectures No doubt a bright man, by consuming the "midnight oil," might be able to pass a creditable examination at the end of a three years' course of evening lectures; but "the demands of modern medical education" call for something more than this, viz, for "practical work in laboratories and hospitals"

The student obtains his practical knowledge of anatomy in the dissecting room, and his skill and success as a surgeon depend largely upon the extent and precision of this practical knowledge This has long been recognized, and the candidate for graduation has been obliged to present evidence that he has done a certain amount of work in the dissecting room But it is only recently that our leading medical colleges have required a practical knowledge of chemistry, physiology, pathology and materia medica such as can only be obtained in the laboratory

The requirements for graduation of the Medical Department of the University of Georgetown are stated as follows

"The candidate must be of good moral character and at least 21 years of age He must have studied medicine not less than four years, during which he must have attended four full courses of instruction, delivered in some recognized medical school, the last of which shall have been delivered in this institution He must have attended at least two courses of practical anatomy, laboratory courses in physiology, chemistry, histology, pathology and bacteriology, and the clinical courses of instruction"

The laboratory work required is an essential part of a medical education, not only on account of the practical character of the knowledge acquired, but because of the special training in scientific methods and the development of a spirit of scientific investigation which results from such training

The great obstacle to the advancement of medical science in the past has been respect for authority and the acceptance of theories and supposed facts without submitting them to the test of experimental verification

/ The humoral pathology which Galen (born A D 130), developed from the previous teachings of Hippocrates, controlled medical thought and influenced medical practice for fifteen hundred years But we have been emancipated from the trammels of theory and superstition, and the medicine of to-day is largely based upon exact observation and experimental demonstration In other words, we may now properly speak of medical science—for, while our knowledge in many directions is far from being complete, it is founded upon a scientific basis of observation and experiment and is being rapidly extended by scientific methods

Scientific medicine, as taught in our medical colleges, includes all that is known of human anatomy and physiology, of pathology and clinical medicine, of the natural history of disease, and the influence of physical, moral and chemic agencies upon the human body in health and disease, of the action of drugs and their preparation for therapeutic purposes And the scientific physician is one who possesses a large share of this knowledge and has the faculty of applying it for the cure of his patients—without the natural aptitude and acquired skill necessary for applying his knowledge a man might be scientific, but could not properly be called a scientific *physician* His degree makes him a Doctor of Medicine, but not necessarily a physician, "A person skilled in physic or the art of healing" (Webster)

The scientific physician uses water of different degrees of temperature for the relief of various ailments, but he is not a hydropath, he makes use of electrical currents of different degrees of tension and potency for the treatment of such ailments as experience shows to be benefited by electrical treatment, but he is not an electropath, he uses alkalies to neutralize acids and cold baths to reduce febrile heat, but he is not an allopath, he rubs a frozen nose with snow and gives atropia in opium poisoning, but he is not a homeopath In short, he disclaims being any kind of a path[1] And in his name I protest against his being called an "old school" doctor If there is anything newer in medicine than the recent important additions to our knowledge of the causes of disease, and to the means of diagnosis and methods of treatment which have been made within the ranks of the profession during the past fifteen or twenty years I have not heard of it It is somewhat embarrassing for a recent graduate, who has been working hard for four years to acquire a knowledge of medicine in all its branches, to be asked by a well-meaning friend whether he is an old school doctor He should answer that he belongs to the new school of scientific medicine One of the leading features in this new school of medicine is the scientific spirit which asks in regard to everything, "Is it so?" and declines to accept an affirmative answer until an experimental demonstration of the fact has been made In the absence of such demonstration the scientific physician says "It may be so," "It does not appear probable," or "I don't know whether it is so or not" This unwillingness to assert that a thing is true in the absence of proof is a result of the kind of training which scientific men receive in laboratories, where everything is put to the test of experiment No doubt the physician who is thoroughly imbued with this scientific spirit is, to a certain extent, at a disadvantage when he begins to practice his profession To say "I don't know" requires considerable courage, especially on the part of a young doctor when the questioner expects to receive information and is willing to pay for it The unthinking and unscientific are very ready to believe that not knowing is due to ignorance on the part of the individual, when, in reality, it is the brief statement by a well-informed man that the matter referred to has not been determined and that no one can give the desired information Under the same circumstances an ignoramus or a charlatan, instead of confessing ignorance, would perhaps gain great credit by a positive assertion with reference to a matter of which he could not possibly know anything But science teaches that a confession of ignorance is the first step toward the attainment of knowledge When the anxious mother says "Doctor, is it diphtheria?" and receives the answer, "I don't know, there is a somewhat suspicious deposit upon the tonsils and I will at once make a microscopic examination and a culture which will enable me to determine the matter within twenty-four hours," she will probably not be as well satisfied with her medical attend-

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[1] There have been several recent additions to the list of *paths* We have osteopaths biopaths and vitapaths etc In a western city in June last a coroner s investigation resulted in the finding that the death of a certain individual was due to the effects of drugs ignorantly administered by one Campbell who claimed to be a professor in a "Vitapathic" college In imposing sentence Judge Dustin said

"Men who knowingly go into a sick room and prevent anything being done for a dying man by silly incantations and laying on of hands are reponsible for his death and ought to be on a par with a murderer in the eyes of the law God help the dying man who relies upon you or any of the so-called graduates of this quackery You speak of vitapathy being of a higher power than medicine and you say you ordain *ministers* at the same time you matriculate vitapathic physicians Your methods are an insult to intelligence their practice is a criminal abuse of ignorance and your college a disgrace to civilization ant when she receives the assurance, after such an examination, that "it is not diphtheria," as she would have been with the non-scientific doctor who claims to recognize diphtheria at a glance, announces his diagnosis at once and "cures" the patient within a day or two The latter has earned the mother's lasting gratitude and she will not fail to recommend him to her friends as competent to cure any ailment to which humanity is liable But our scientific doctor will make his way in the end He will enjoy the confidence of his fellow-practitioners and his patients will learn after a time that when he says he knows a certain thing he really knows it, and when he says he don't know, he will do his best to find out, if the question can be solved by reference to the medical works in his library, or by an experimental investigation which it is practicable for him to make personally, or which can be made for him in a laboratory devoted to scientific research He does not make a snap judgment but waits until all the evidence is in It is evident that the opinion of a man of this type is of value His diagnosis, his prognosis and his advice as to treatment are based upon a careful investigation of the case in hand, a full knowledge of the literature relating to similar cases, and a precise appreciation of the indications to be met by the treatment prescribed

The conservatism which makes the scientific physician willing to confess ignorance is a very different conservatism from that of the pretentious charlatan and quack who gives an emphatic denial to facts that are well established, upon evidence with which he is not familiar or which his intellect is not capable of appreciating I have protested against calling the graduates of our leading medical colleges "old school doctors," but it must be admitted that there are still some very old school doctors among the former graduates of regular medical colleges In the ranks of the medical profession, as elsewhere, there are men who have been left behind in the rapid development of our knowledge, and who protest against the acceptance of facts which have been established by the most unimpeachable experimental evidence By such protest they simply reveal their own ignorance But as their opinions are often stated in good and forcible English, other persons, equally ignorant of the evidence, frequently accept them, or quote the old saying "When doctors disagree who shall decide "

As examples of this conservatism of ignorance, I submit the following quotations from two recently published papers, having the names of regular graduates in medicine attached to them In a report to a State medical society signed by a reputable physician, among other conclusions formulated, I find the following

"2 That the etiology of infectious diseases is as yet *sub judice*, and that therapeutic methods based upon the assumption that infectious diseases are caused by specific microorganisms are unscientific "

Another medical writer concludes a popular magazine article as follows

"We are brought, therefore, to this conclusion inevitably the germ theory is an assumption of causes, of the existence of which we have no evidence, to account for effects which they by no means explain "

The training which the medical student of the present day receives in the laboratory is essential for other reasons than because of the scientific spirit which is developed by personal verification of the facts which are recorded in his text-books of chemistry, histology, bacteriology, etc Not only does this personal verification impress the facts upon his memory, but he obtains that technical skill in the use of instruments and methods which can only be acquired by practice In the chemic laboratory he learns to detect poisons, to determine the nature of impurities in water or air, to examine urine, etc His practical course in histology makes him familiar with the use of the microscope and with the minute anatomy of healthy tissues In the pathologic laboratory he learns to recognize the results of different morbid processes and the presence of parasitic microorganisms in the blood or tissues, to distinguish between malignant and innocent growths, etc By cultivating the principal pathogenic bacteria, and examining them under the microscope after treatment with various staining agents, he becomes familiar with their biologic and morphologic characters and is able to recognize them wherever they may be encountered In short, he obtains a practical knowledge of many things which it is essential for him to know, in order that he may be a skillful physician The knowledge to be obtained from books, which enables the student to pass a creditable examination, does not make him a chemist, a pathologist, a skilful diagnostician, a surgeon or a physician, any more than the knowledge to be obtained by reading books on agriculture makes a man a farmer, or than the study of books on navigation would enable a man without practical experience to take command of a trans-Atlantic steamer It is in recognition of this fact that the Medical Faculty of the University of Georgetown has, as already stated, decided to extend the hours of instruction "so that more time may be given to practical work in laboratories and hospitals " Every physician of experience will approve of this decision It is true, that but few of the prominent physicians of the present day enjoyed such advantages as it is proposed to give to their successors It is also true, that a majority of these prominent physicians were very imperfectly prepared for the duties and responsibilities of a general practitioner when they received their medical degree This fact has long been recognized within the ranks of the profession, and it is for this reason that hospital appointments have been so eagerly sought by those having a proper professional ambition In the hospital, the young doctor learns to apply his knowledge and to meet emergencies with composure and professional skill His books have taught him what to look for, what to listen for and what to feel for, but practice alone can give him the trained eye, the trained ear and the *tactus eruditus* of the accomplished physician

In the "Circular of Information" already referred to, I find the following announcement

"A laboratory course in bacteriology will be given, which will continue over one half of the session This will consist of bacteriologic technique, and the study and diagnosis of diseases which are caused by microorganisms

"The student will also be given opportunities to observe and investigate special problems in clinical diagnosis, disinfection, etc

"The laboratory course is obligatory "

I am especially pleased with the last clause of the quotation just read "The laboratory course is obligatory " And I trust that this applies to all of the laboratory courses For I am convinced that these constitute an essential part of the practical training of the scientific physician. It is in the laboratory that the student acquires deftness in delicate manipulations required in his chemic, histologic and bacteriologic studies; here he learns to measure with accuracy, to appreciate the slight differences in color reaction, in form or in structure, upon which he must often depend for the recognition of toxic agents, pathogenic germs or abnormal growths; his eye becomes trained to recognize the malarial plasmodium, the tubercle bacillus and other microorganisms which are only revealed to us by the highest powers of the microscope, under proper illumination, and in skillfully mounted preparations; and it is here that conditions are most favorable for the development of that spirit of doubt and inquiry which is so essential for the progress of scientific medicine. Where there is no doubt, there will be no investigation. The farmer who accepts the traditional belief that certain seed must be planted in the light of the moon, in order to obtain the best results would consider it a waste of time to make a comparative experiment. But it is by means of comparative experiments that we arrive at definite conclusions in the laboratory, and the great diversity of opinions with reference to the curative action of drugs is largely due to a failure to apply the same methods in practice. This failure has been partly due to want of appreciation of the necessity for a control experiment in judging of the results supposed to follow a certain course of treatment, and partly to the difficulty of making such a control experiment in clinical medicine. The unscientific mind jumps at conclusions that are entirely unjustified by the facts. The warts upon the child's hand are rubbed with a piece of meat which is thrown over the left shoulder, etc., and they subsequently disappear; a horse chestnut or a potato is carried in the pocket for years and the individual does not suffer from rheumatism during the entire time. The child has a high fever at bed time, the mother gives it a sugar pill and the next morning the fever has entirely disappeared, and so on, *ad infinitum. Post hoc ergo propter hoc.* But the man of science asks, What would have happened if the warts had not been rubbed with meat, or saliva, or whatever may have been the particular fetich employed? Would the man have had rheumatism if he had left the horse chestnut on the tree or the potato in the ground? Would the child's fever have disappeared if the mother had failed to give it the sugar pill? To determine this, a comparative experiment is evidently required. Take the case of the child, for example. To determine whether the disappearance of the fever was in fact due to the administration of the sugar pill, we should have another exactly similar case—a child of the same age, under similar conditions and suffering from an elevation of temperature due to the same cause. One child should have the pill and the other should have nothing. Even then, the result would not be conclusive. Science demands that the experiment should be repeated several times. There are so many chances that the conditions may not, after all, have been exactly identical. No truly scientific man would venture to announce a fact as established upon the basis of a single successful experiment. And, having in view the fallibility of human judgment, the tendency to draw conclusions favorable to the prejudices or desires of the individual, and the frequency with which erroneous conclusions are published upon what appears to be a substantial experimental basis, science demands verification of reported results by two or more independent investigators before finally accepting these results as demonstrated facts. All this is so far away from the ordinary methods of arriving at conclusions that the conservatism of the scientific physician meets with little sympathy on the part of the general public. The man with a horse chestnut in his pocket is not only convinced by his individual experience that this is a sovereign cure for rheumatism, but he is apt to resent your non acceptance of his experiment as conclusive. We, on the other hand, know that medical literature abounds in instances of the ultimate failure of therapeutic agents and methods of treatment which have for a time been lauded as specific and have been indorsed by prominent physicians. We are therefore becoming more and more exacting in our demands as regards proof, and, as a result, medical science is making rapid progress. How great this progress has been is not fully appreciated by the nonmedical public.

While we justly pride ourselves upon the rapid development of our knowledge during the last half of the present century we must not forget that, in some directions, the foundations of scientific medicine were substantially laid by the illustrious physicians of the past. The time at my disposal will not permit me to give an extended review of the development of medical knowledge, but a brief reference to some of the more important events which have marked this progress will perhaps be useful, as showing the extent of the field and the advantages which the physician of to day has over his predecessors.

Hippocrates and his illustrious successors Celsus, Galen and others, were certainly the peers of modern physicians in their powers of observation, and we are indebted to them for a mass of recorded facts relating to disease which have been verified and added to by subsequent observers. But observation, in the absence of the instruments and methods of modern science, goes but a short distance in the direction of unveiling truth, and often leads to erroneous conclusions. Observation led the ancient philosophers to believe that the sun goes around the earth and that water and air are elements. The experimental methods of modern science have revealed to us the constant presence of three elementary gases in the atmosphere, one of which is also a constituent of water, while one—argon—has only just been revealed to us by the researches of Professor Ramsey and Lord Rayleigh. One of the first lessons to be learned by the student of medicine is not to trust implicitly to the evidence of his senses. This is the fundamental error of ignorant persons and the foundation of demonology, and superstitions of all kinds. The eye tells us that water from the well is perfectly pure, but the microscope shows us that it swarms with living organisms. The touch tells us that the patient has a high fever, but the clinical thermometer says, no—the sensation received was due to the comparatively low temperature of our own hand at the time of making the observation, etc., etc.

The anatomic knowledge of "the father of medicine" was very imperfect, because it was not obtained by the dissection of the human body. The Greek physicians Herophilus and Erasistratus, of the Alexandrian school of medicine, who lived about 300 B. C., are believed to have been the first to study anatomy in this way, and from that time our knowledge in this essential department of medicine has steadily increased until, at present, it is perhaps more nearly complete than in any other branch. The medical student of to day is expected not only to acquire an accurate knowledge of anatomy in the dissecting room, but he must study the minute anatomy of the tissues by means of the microscope and the methods of investigation which he will learn in the histologic laboratory. He is also expected to have at least an outline knowledge of comparative anatomy, a branch of scientific research which dates back to the time of Aristotle (384 B. C.), and which has been greatly developed during the present century. Our knowledge of minute anatomy has been largely acquired during the past sixty years, as a result of the improvements in the compound microscope made about 1830. The perfecting of this invaluable instrument of research has also led to vast additions to our knowledge in the department of general biology, of which it is important that the medical student should possess at least an outline. A knowledge of the structure and development of lower organisms is justly regarded as a proper introduction to the study of human anatomy and physiology. Embryology, a branch of science which may almost be said to have had its birth in the present century, must not be neglected by the student of medicine. It is true that Galen made observations upon the development of the incubated egg, and that Harvey, in the seventeenth century, made some important observations in the same line of investigation, but the minute and accurate knowledge of the present day depends upon the comparatively recent improvements in the compound microscope just referred to.

Progress in physiology, as in other branches of medical science, has resulted from the application of the experimental method to the problems to be solved. Galen made an important addition to human knowledge when he demonstrated that urine is secreted by the kidneys, a fact which, apparent as it seems to us to be, had not previously been recognized. It was nearly fifteen hundred years later that Harvey (1628) demonstrated the circulation of the blood, a discovery which is justly considered one of the most notable events in the history of medicine. The subsequent explanation of the process of respiration by Lavoisier (1783), the experiments upon gastric digestion by Beaumont (1834), and the discovery of the function of the vasomotor nervous system by Claude Bernard, opened the way to a fertile field of research which is still being vigorously prosecuted in physiologic laboratories, and the results attained constitute an essential part of a medical education. The progress of our knowledge of physiology has necessarily been secondary to the advancement of chemistry. Indeed, physics and chemistry constitute the foundation of medical science. We therefore place Priestley's discovery of oxygen (1783) among the epoch-making events in the history of medicine. It is due to chemistry that we are able to use the active principles of various drugs of demonstrated value, instead of the crude material—leaf, root, or bark, and the chemists have recently made many valuable additions to the list of approved therapeutic agents—principally from the series of coal-tar products.

The importance of carefully studying the results of morbid processes in the post mortem room and in the pathologic laboratory is now generally recognized, and the medical student will find that since Morgagni (1682 1771) led the way in the study of morbid anatomy, an enormous amount of work has been done in this field of investigation. He will be required to make himself familiar not only with the facts developed, but with the methods of research and the microscopic and gross appearances of tissues which have undergone the changes due to disease. Important as these studies are, the results obtained, from a practical point of view, are eclipsed by the brilliant discoveries which have been made during the past twenty years with reference to the etiology of infectious diseases which to a considerable extent have been prosecuted in laboratories devoted to pathologic research. These discoveries, like others heretofore referred to, depend primarily upon the improvements which have been made in the compound microscope, especially in high power objectives and means of illumination, and upon methods of research devised by the pioneers in this field of investigation, among whom the names of the French chemist Pasteur, and the German physician Koch are preeminent.

The development of our knowledge relating to the bacteria dates from the controversy relating to spontaneous generation, which was finally settled by the experimental demonstration made by Pasteur (1860), that no development of microorganisms occur in organic infusions which have been sterilized by boiling, and that fermentation and putrefaction depend upon the introduction of living germs into such infusions. The distinguished French physician Davaine, first demonstrated the etiologic relation of a microorganism of this class to a specific infectious disease. The anthrax bacillus had been seen in the blood of animals dying from this disease by Pollender in 1849 and by Davaine himself in 1851, but it was not until 1863 that the last named observer felt himself justified in asserting, as a result of inoculation experiments, that the bacillus was the essential etiologic factor in the production of anthrax.

In 1873 the German physician Obermeyer, discovered the spirillum of relapsing fever in the blood of patients suffering from that disease. The typhoid bacillus was discovered by Eberth and independently by Koch in 1880. The same year the present speaker discovered the pathogenic micrococcus which is now recognized as the cause of croupous pneumonia. In 1882 Koch published his discovery of the tubercle bacillus. The glanders bacillus was discovered by Loffler and Schutz in 1882, the bacillus of diphtheria by Loffler in 1884, the bacillus of tetanus by Nicolaier in the same year. It was also in this eventful year that Koch published the discovery of the cholera spirillum. Since these important discoveries our knowledge of the pathogenic bacteria has rapidly increased, and it is now demonstrated that erysipelas, septicemia, puerperal fever, wound infections, boils and abscesses, peritonitis, pleurisy, etc., are due to general or local infection with germs of this class.

Evidently the medical student of the present day must be made familiar with these recent additions to our knowledge of disease, and his acquaintance with these microscopic foes of the human race should be of that practical character which can only be obtained in the laboratory.

I have already occupied so much time that I can refer but briefly to the advancement in clinical medicine, which depends largely upon additions to our knowledge already referred to The use of the stethoscope, the clinical thermometer, the laryngoscope, the ophthalmoscope and other aids to diagnosis has introduced certainty in place of uncertainty, science in place of guesswork Our knowledge of the pathogenic bacteria tells us not only where to find them, but how to destroy them when they are accessible to the action of physical or chemical agents This knowledge has undoubtedly resulted in the saving of thousands of valuable lives This has been accomplished by means of antiseptic or aseptic methods in surgical and obstetrical practice and by the intelligent use of disinfectants for the destruction of infectious material wherever it may be found As a result of such procedures we have during recent years escaped any devastating epidemic of cholera or yellow fever, although the first mentioned disease has twice been introduced into the harbor of our principal seaport, and yellow fever prevails annually in the cities of Havana and Vera Cruz, with which we have close commercial relations

The medical student is expected to prepare himself for continuing the work of his predecessors in preventive medicine, although this work has a constant tendency to diminish the demand for his services To the credit of our profession be it said that this selfish point of view has never controlled its action, and it is largely to the efforts of physicians that existing laws and regulations have been enacted for the prevention of the extension of infectious diseases, the maintenance of a pure water supply for towns and cities, and the general sanitary supervision exercised by local and State boards of health

The most notable additions to our therapeutic resources are the antitoxins of diphtheria and tetanus, and the use of thyroid extract for the cure of myxedema But I can not dwell upon the possibilities in the way of specific medication which are suggested by these recent achievements of scientific medicine Certainly I have said enough to indicate to the young man who contemplates entering upon the study of medicine that his best energies will be needed to master all the important details in the various branches to which reference has been made, and to justify the Medical Faculty of the University of Georgetown in extending the hours for instruction and in requiring that students shall take the practical laboratory courses which have been arranged for, as announced in the recent Circular of Information already referred to

Having attempted to give you some idea of the present status of scientific medicine, I desire briefly to call your attention to certain matters which are extremely discouraging for the truly scientific physician although he seldom refers to them, and, perhaps wisely, trusts to time and the diffusion of knowledge to remedy the evils to which I shall refer

Hand in hand with the progress of medical science we see an army of pseudo scientific quacks who trade upon the imperfect knowledge of the masses, and by plausibly written advertisements convince many, even of the educated classes, that their particular method of treatment is based upon the latest scientific discoveries A Priestley discovers oxygen, the physiologists show that this gas is essential to life and that the maintenance of a full degree of vital activity depends upon the possession of healthy lungs of ample capacity and the respiration of pure air, the scientific physician discovers defects in the respiratory apparatus, and under certain circumstances prescribes oxygen for the relief of symptoms resulting from a deficient supply of this life sustaining gas But the pseudo scientist extols oxygen as a cure all for pulmonary complaints, or invents an apparatus which may be held in the hand or carried in the pocket by which oxygen will be absorbed in some mysterious way, and without difficulty obtains numerous certificates as to the marvelous cures effected by his method A Franklin draws lightning from the clouds, a Galvani shows that an electrical current may be developed by the contact of metals and that such a current causes muscular contraction, and innumerable patient investigators add to our knowledge of electricity The scientific physician avails himself of this potent agent for the treatment of certain ailments in which it appears to be indicated, but admits that he meets with many disappointments in his clinical experiments The pseudo-scientific quack writes, or has written, advertisements in which fact and fiction are so commingled that even educated persons may be deceived, and having aroused interest in the alleged therapeutic value of this mysterious agent, offers his electric belt, or finger-ring made of two metals, or pocket battery as a sure cure for certain specified ailments, or, if less modest and more certain of the credulity of the public, as a cure for all of the diseases to which man is subject

Again, a Pasteur proves that the disease of sheep and cattle known as anthrax is due to a microscopic organism found in the blood, an Obermeyer discovers a different microorganism in the blood of relapsing fever patients, and numerous patient workers in laboratories rapidly add to our knowledge of pathogenic bacteria Then comes the man with the microbe killer He tells you that all diseases are due to germs in the blood and that his fluid kills them without fail Science has demonstrated that comparatively few of the infectious diseases of man are due to the presence of pathogenic bacteria in the blood, and that the microbe killer has but very little germicidal value, but a credulous public accepts the interested statements which appear to have a scientific basis, and swallows the microbe killer with impunity if not with benefit And so it goes Science establishes the value of the thyroid extract for the cure of myxedema, and immediately the public are called upon to swallow extracts of brain for cerebral trouble, of heart for cardiac disease, etc Even the Chinese pulse doctors obtain a large clientèle on the Pacific coast Their solemn looks and pretentious claims impose upon the ignorant and it is said that even educated people not infrequently consult them It is true that in China, as elsewhere, there are two classes of physicians Those who are educated and who are familiar with the medical classics of their country, and the itinerant quacks who are not only ignorant but unprincipled No doubt the regular practitioner in China believes in his own pseudo-science According to a recent author [1] "The learned Chinese doctor is not ignorant in the sense that he has not studied, as from early youth he has been subjected to a degree of cramming and of learning by rote, such as would discourage and wear out the less patient and less toiling Caucasian He has been obliged to learn stacks of sacred precepts taken from their most ancient sages, and the admixture of intricate and bewildering astronomy, meteorologic signs, and the endless physical complication of concurrent signs, appearances and detached disturbances that he has been compelled to learn by heart is simply appalling Anatomy and physiology cut no figure in these studies and they are considered unnecessary, as disease is a matter depending on good or bad vapors, and is of either divine or diabolical origin In spite of their most elaborate treatises upon the pulse, from which they profess to be able to perform the most skillful diagnoses, they are even unacquainted with the existence of the circulation "

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[1] Dr P C Remondino of San Diego, Cal

The time at my disposal will only admit of a brief reference to the Chinese theories relating to disease and its treatment As was the custom among the more enlightened occidental nations, until a comparatively recent period, their prescriptions often contain twenty or more ingredients, apparently given with a vague idea that one out of the number may prove to be the right remedy These ingredients are obtained from all imaginable sources and include all kinds of nastiness, in the way of excretions, desiccated animal tissues, etc With them, the color of a medicine is an essential character, red medicines being suitable for diseases of the heart, white for pulmonary complaints, black for diseases of the kidneys, green for those of the liver, and yellow for those of the stomach In the use of remedies from the vegetable kingdom, the leaves and branches are most appropriate for diseases of the extremities, the bark should be used for skin diseases, the pith for derangements of internal parts of the body, etc

In conclusion, I desire to emphasize the fact that learning does not enable a man to distinguish between science and pseudo science The learned disciples of Confucius in the Orient, and classical scholars of the pre-scientific epoch in occidental countries, failed to distinguish between the facts of astronomy and the fancies of astrology And, at the present day, eminence as a classical scholar, or as a theologian, or as a jurist, or as a metaphysician, in the absence of a knowledge of the methods and results of modern scientific investigation, does not enable a man to distinguish between science and pseudo-science in medical practice This kind of learning is therefore not essential for the physician, but, as we insisted at the outset, he should not enter upon the study of medicine without having, at least, a thorough knowledge of his own language and of those branches of study pursued in the high schools of our large cities, we now add that a reading knowledge of the French and German will be very desirable if he wishes to keep entirely *au courant* with the progress of medical science

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The Angels of the Ambulance —Mrs Margaret Sangster has contributed to *Harper's Weekly* the following stanzas concerning the young medical "angels" of our cities ambulances

"I never see in our bustling town,
Where the midsummer sun pours fiercely down,
The swift onrush of the ambulance
But I think of the blessed countenance
Of One who walked by lane and field,
And with voice and look the suffering healed
Still, where the city's woes are thick,
The dear Christ spirit heals the sick
And yet He lives in the hearts of men,
And sends His angels with speed again
Wherever the weary plod and fall,
His care and tenderness over all

"And the angels carry lint and lance
And drive in the city's ambulance
Are bluff of speech and deft of hand
And quick with accents of command
And the wind of their coming clears the way
For a breath of heaven in the darkest day"

ORIGINAL ARTICLES.

WHAT THE PATIENT EXPECTS, AND WHAT WE ARE ABLE TO DO, IN CHRONIC CATARRH OF THE TYMPANUM OR MIDDLE EAR, WITH DEAFNESS

Read in the Section on Laryngology and Otology, at the *Forty sixth* Annual Meeting of the American Medical Association, at Baltimore Md, May 7-10, 1895

BY LAURENCE TURNBULL, M D, PH G

Aural Surgeon to the Jefferson Medical College Hospital, President of the Sub Section of Otology of the British Medical Association, and the Section on Laryngology and Otology of the AMERICAN MEDICAL ASSOCIATION *Emeritus Physician to the Department of Otology* of the Howard Hospital Member and one of the Committee of the International Congress of Otology

PHILADELPHIA

In the treatment of all chronic diseases of from six months' to as many years' duration, the prognosis, or what we are able to do, depends upon many factors The first, as a rule, is the duration, the second is if the case is functional, the third, if organic, it is incurable This not only applies to the ears but to the lungs, liver, kidneys, eyes and brain

Can we improve them? We can, if the disease is functional and not organic When the patient with organic disease of the lungs applies, not for a cure, but for relief, we frequently are able to diminish the cough and expectoration, build up the general health, and by changing the habits and climate, improve the case So also with the liver, kidneys and brain In the case of the eye, sometimes by a skillful and delicate treatment or an operation we are able to give one-sixth, one-eighth, one fourth or even one-half the amount of vision, by which, with the assistance of glasses properly fitted, the patient is able to make his way alone, and even to read and work This slight improvement is almost always accepted with cheerfulness and even gratitude The most unreasonable of all patients to be treated, both in public and private, are the deaf They come to the aural surgeon and expect a *cure*, not relief—and the general public and the quack encourage them in this demand Many of them come with varying deafness, from *nil*, to hearing the ordinary watch close to the ear, and when by prolonged treatment, they are able to hear from ten to twelve inches, or more, also one person's conversation, or, by the aid of the trumpet, ordinary conversation, they are never thankful, but state that So-and-So was cured of deafness, not knowing that in our list of diseases of the ear causing deafness there are hundreds of cases from cerumen or ear wax, resting on the drum membrane, or a slight catarrh in the nose, throat or Eustachian tube, to disease involving the internal ear, auditory nerve or brain There are also a number of inherited diseases of the ear and those contracted by impure habits, which cause most profound deafness never to be cured when of long duration Then there is accompanying these forms of deafness, constant and persistent noises termed tinnitus aurium, or ringing sound, which as a rule is absolutely incurable after months of careful treatment This tormenting, distressing condition which is only a symptom of a deeper form of the diseased ear, causes great unhappiness in the individual This class of patients is of a very jealous disposition, ready to quarrel even with their best friends, they also imagine without cause that persons are talking about them, stating something wrong because they do not hear With the assistance of certain medicines, and true desire on their part, these sounds may be ameliorated, and if the patient is willing to aid the physician, not permitting the mind to dwell upon them, great comfort may be received If, instead of this effort on their own behalf, and a willingness to follow the counsel of their friends and aural surgeon, they become morbid and irritable, keeping by themselves, avoiding all pleasant company and amusements which could be had by the aid of the hearing trumpet, or still better, hearing with their eyes, these noises will sometimes become unbearable and a form of insanity ensues, and in some very rare cases in an insane moment of desperation they commit suicide That is the reason why they should avoid the causes which increase it This is no fancy sketch, but sober truth No wonder the aural surgeon is pleased to be able by various operations to endeavor to relieve them from this dreadful form of disease, as well as aural vertigo, in which the patient is liable to fall forward, or sometimes backward at the risk of life

ILLUSTRATIVE CASES

These cases will be selected mostly from our own observations, and one from our colleague, Dr MacCuen Smith, the histories being brought up to the month of May, 1895

Case 1—M K, a lady of refinement and education, aged 40, *having met with* reverses had to resort to a manufacturing establishment for a living She suffered for years with chronic aural catarrh (dry) never having had any discharge, with chronic rhinitis and progressive deafness, which entirely unfitted her for performing her duties In spite of the usual treatment for years, she was so deaf that she was desirous of an operation, hoping thereby to obtain relief She was taken to Jefferson Medical College Hospital Feb 6, 1891 For twenty-four hours she was placed under very limited diet, with gentle purgatives and kept at rest in bed On the morning of the operation she had a very light breakfast (The urine had been tested for albumin and a careful examination made of the heart both of which were found in normal condition) The chief surgical resident administered the anesthetic, ether, of which she took a considerable quantity without going under its influence Finding this to be the case, chloroform was administered with care and the ether withdrawn This agent acted very promptly but on examination of her pulse it had ceased to beat The chlo form was withdrawn and efforts were made at resuscitation with artificial respiration, with depression of the head and elevation of the lower extremities, after a time the pulse returned and the operation of removal of the ossicles was successfully performed She had some vomiting which was not excessive as she had taken internally a few doses of solution of cocain, and sulphate of strychnin The parts were cleaned with iodoform cotton, and the ear carefully packed and not disturbed for twenty four hours then the cotton was replaced The ear was covered with a large mass of absorbent cotton, and a bandage applied No food was given until the stomach was quiet, and all noises were avoided, as even walking across the room was painful to her

The blood was carefully mopped up, and soon the ear became dry No wash of any kind was used and in the course of one week she was allowed to sit up and permitted to go home, though she continued coming to the writer's office to have the ear dressed The membrane which had been removed was soon restored by pseudo membrane and was prevented from adhering to the promontory by keeping the Eustachian tube free, by the use of Politzer's douche, and the vapor of ether

The restoration of her hearing was most successful for general conversation at about five feet She was able to resume her daily duties, putting up medical preparations, and to receiving orders even in a moderately loud voice, and heard an 18–36 inch watch about half the normal distance It is now three years since the operation and the patient has been exposed to all sorts of weather having to travel at least a mile to her work at the establishment through one of the coldest winters of many seasons She only came a few times to the office to have removed some slight accumulations of a light color, and to have her nose and pharynx cleansed with antiseptic sprays and the Eustachian tube kept open

Case 2—*Operation for the Relief of Deafness and Vertigo*—M H F, aged 45, a lady of wealth and refinement, had been deaf ever since she was very young, and she stated this was the result of scarification of the tympanic membrane by the physician who first had her case in charge She had suffered with a diseased throat, with a deviation of the septum very high, and enlarged glands She takes cold easily and suddenly the swelling of the throat and nose being very great, followed by intense deafness She had been under the treatment of several laryngologists, electricians and aurists, but only with temporary benefit

*On examination there was found in the right ear, thicken*ing of the membrana tympani, the handle attached to the promontory, and the whole malleus twisted on its axis, Eustachian tubes patulous, H D watch pressed on contact Tuning fork full C, auditory nerve normal bone conduction good Excessive tinnitus and vertigo The left ear was in similar condition The operation was performed, chloroform and ether being used, Feb 5, 1892 The malleo incudal joint was firmly ankylosed The membrana tympani, the malleus and the incus were removed The operation was attended with some difficulty on account of the hemorrhage Hearing was improved after the operation, and the tinnitus had decreased

June, 1893, hearing continued, a new membrane had formed and the hearing in that ear had become defective after a time The membrane was incised but the hearing was not what was desired, and a few months later the other ear was operated upon, when she was able to hear ordinary conversation, to give orders, and to attend to shopping and all outdoor work She could then hear her own watch four inches off, and even a clock in the opposite room

One of the most distressing symptoms which this patient suffered from, was intense vertigo so that she would fall back without notice, and she was afraid all the time that this would happen on the stairs The operation relieved the vertigo, but did not entirely the roaring tinnitus, which was caused in part from mucus in the orifice of the Eustachian tubes and from the diseased nose, in spite of careful treatment

In a note received October, 1894, two years and a half after the operation, she wrote "I can get about *very well in the stores* I have not the least trouble and always understand what is said, for those who are not deaf raise the voice on account of the street noises so that I have little difficulty to understand all that is said, but when it is quiet, there is my trouble "

Even when writing this, she was suffering from an acute nose and throat catarrh, for she adds "I wish I had some of those benzoate of soda tablets which I took before, when my breath, nose and throat were out of order, they acted well with my stomach " (The same catarrhal condition)

The great improvement which followed the operation on the left ear she stated continued, but the right side filled up at times so as to require the application to the nose and throat of a spray and exhauster, and even the galvanic current, which for the time caused a slight return of the dizziness, but which soon passed away with improvement of hearing

This patient stated in another note, that her hearing always improved when she could breathe salt air, and that the tinnitus and deafness were brought on by constant worry This the doctor can not always prevent, but can aid in change, and removal of the cause We feel, as physicians, we can do much to ameliorate the condition of the nervous system In another place she writes "Your patient still *hopes for a better time coming,*" and again, "Your patient is not of an unhappy disposition, but under ordinary circumstances would be bright and happy "

These peculiar physiologic and psychologic matters have, as aural surgeons and physicians know, much to do with both deafness and the peculiar noises which are heard by certain classes of nervous or neurotic patients and we must be physicians of the mind as well as of the body

Case 3 —A Case of great Relief to Tinnitus Aurium —H M , aged 24, a student of medicine, has been a sufferer with chronic middle ear catarrh and tinnitus aurium with, first, acute and subsequent chronic rhinitis He was in the office and studied with a distinguished throat and ear specialist, and was treated with great care, still his suffering was so great that it interfered with his studies His nervous system was very impressionable to all kinds of drugs, and he had employed every means of relief, even to the freezing by ether and rhigolene over the mastoid, etc He made up his mind to have an operation performed He was not willing to go to bed, but was operated on in a laryngological chair at the Jefferson Medical College Hospital, August, 1893 The local anesthetic was a 10 per cent ointment of cocain which had been applied to the drum membrane the night before, and early morning of the operation The malleus was removed with a portion of the membrane, so that access was had to the incus and stapes Mobilization was then employed, and after a few days when the parts were healed he experienced considerable relief from the noises He did not desire any other operation as his hearing was not very defective on that side

DR MACCUEN SMITH'S CASE OF OPERATION FOR DEAFNESS, PAIN AND VERTIGO

Mrs H G , aged 42 years, N J , twelve years ago was treated for severe tinnitus in both ears for a continuous period of two years, which, however, failed to be improved', at times the noises were more intense At the expiration of these two years, the hearing (which had been gradually growing dull) suddenly became much worse Accompanying this unexpected impairment of hearing was an attack of vertigo that has continued at intervals ever since, about seven years The hearing power in this time has become greatly impaired For the past four years she has suffered periodic pain in the right ear, sometimes being very acute, and it would last for one or two days It is needless to say that this patient consulted various authorities, but no permanent benefit was derived In June, 1892, when she consulted us, the membrana tympani was found, R E , chronically inflamed and firmly adherent to the promontory, could hear only loud conversation at fourteen inches , watch and fork were audible only on contact , bone conduction was normal Has never had any discharge On account of the increasing tinnitus, vertigo and pain, the patient refused any line of treatment except operative, and we could see no good reason why we should extend any hope for relief by following in a line of non-operative treatment that had failed in the hands of several competent physicians

June 6 we excised the membrana tympani, malleus and incus, and packed the cavity with iodoform gauze In three days this packing was renewed, at which time the pain was entirely relieved, the hearing was improved somewhat, although the vertigo continued Two weeks after the operation the hearing was markedly benefited, the pain did not return, and the vertigo somewhat improved In this condition she left the hospital, and I did not see her again for three months Reports her health very good, hearing about two-thirds normal, pain and vertigo both relieved Have seen the patient at intervals for two and a half years after the operation, and the above improved condition has continued uninterruptedly

These three cases, with the one by Dr Smith, which could have been increased by many others, cover the good results of the operations in *pain, deafness, vertigo and tinnitus aurium*

255 South 17th Street

The *Lancet-Clinic*, of Cincinnati, calls on the Ohio doctors to defeat at the next election all of those candidates for reelection to the Legislature who refuse to vote for a medical bill, and those who voted against it We agree with our contemporary that it is quite time medical men understood everywhere the value of organization and the necessity for standing solidly together in those matters in which they have a common interest The reason why the politicians have paid little attention to the profession is because the profession have paid no attention to the politicians A sound thrashing occasionally would secure wholesome respect

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WHAT ARE THE CURATIVE EFFECTS OF PNEUMO- AND PHONO-MASSAGE ON THE MIDDLE AND INTERNAL EAR?

Read in the Section on Laryngology and Otology, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore, Md , May 7-10, 1895

BY LOUIS J LAUTENBACH, M D , Ph D

PHILADELPHIA

This paper which I have the pleasure of presenting to you, is but an effort to explain the results achieved by my method of employing ear massage I first presented the subject of ear massage to the Pennsylvania Medical Society in May, 1894, and in two subsequent communications to the Philadelphia Medical Society, one in May, the other in September of the same year, still further outlined the method and its results

Recalling for a moment the method and its use, you will remember that I employ it always through the external meatus by means of double or single ear tubes fitting tightly in the canal, and that I use either pneumo phono or mixed massage By pneumo-massage I mean the massage occasioned by the impact of a column of air thrown inwardly on the drum-head, or, where this is perforated or not present, into the middle ear, or else by the suction effect of a partial vacuum being created within the ear tubes—these air movements being unaccompanied by sound Phono-massage refers to the carrying of sound of various pitches and volumes through the meatus to the drum-head and middle ear By mixed massage, I refer to the carrying of the two kinds, phono and pneumo at the same time Practically, pneumo-massage is always, to a greater or less extent, accompanied by some phono-massage, from the fact that the mechanical appliances producing it are always more or less noisy My experience with these methods has been extensive and on the whole successful Their relative value in each individual case is as yet not perfectly clear to me, but each it will be found has its special sphere of usefulness

When we consider how difficult and inaccessible to treatment is the ear, we can but acknowledge that forms of treatment so easily applied as these, if found to exert any influence on this organ, must prove exceedingly valuable

We will first consider the influence of pneumo-massage on the various ear structures, premising our remarks with the assertion that to a degree the phono-massage has a like effect, in addition to a direct action which it exerts on the ear nerves By the application of pneumo-massage by my vacuum method, we occasion an outward motion of the drum-head, with a swing of the handle of the malleus and an outward movement of the entire chain of ossicles with a withdrawal of the stirrup from its close application to the oval window By reason of this withdrawal, there is occasioned a movement of the labyrinthine fluids, in addition to this, the attenuation of the air of the middle ear exerts an outward drawing effect on the membrane of the round window, which in turn causes a disturbance of the labyrinthine fluids immediately within it By this motion of the fluids the otoliths are thrown into action and excessive pressure within the semicircular canals and cochlea is temporarily overcome In consequence of this, the pressure on the nerves is relieved and they are given time to recuperate, at the same time the circulation is stimulated, and because of this general activity, effete products are removed and morbid changes controlled The middle ear and all its various structures including the Eustachian tube are affected by the massage and participate in the renewal of these active circulatory changes

Phono massage occasions all the changes above mentioned, but in a minor degree only However, in addition, it affects the ear nerve's function by sending a repeated or a continuous message over it—this latter method of using a continuous sound to stimulate a diseased ear nerve, I now rarely employ The phono-massage resembles pneumo massage in causing a to and-fro movement of the ear conducting apparatus, but the number of movements per minute is very great, depending upon the pitch of the sound, and the amplitude of motion is exceedingly small as compared with that produced by pneumo-massage While this form affects the middle and internal ears, it affects also the auditory nerve, and if the sounds be not too long continued the effect on the nerve is apt to be good and a stimulation is produced, but if long continued or following too quickly, one wave upon another as in the use of high notes, or when too loud, the effect is apt to be harmful by exhausting the nerve substance or by tiring the nerve's central ganglion The method which I most frequently employ—a combination of mild and regular pneumo massage with mild phono massage—affects the structures as above mentioned, and has, in my hands, proved the most advantageous Under its influence you can observe the drum-head bulge outwardly, its circulation increase, and the hearing faculties improve, while often headaches and full, heavy and giddy feelings caused by pressure upon the labyrinth or from morbid ossicular adhesion or constriction of the blood vessels disappear At the same time, the ear nerves begin to regain their full functional activity and there is a marked improvement in the hearing as tested by bone as well as by aerial conduction

The results obtained by these methods on the internal ear have far exceeded my anticipations Having been taught the hopelessness of the treatment of diseases of the internal ear, it has been a subject of great surprise and pleasure to find that by such methods even cases of extreme disease of this structure could be improved I have now quite a number of patients who belong to the class ordinarily known as that of the deaf and dumb, where, by the most accurate and careful ear testing of which I have any *knowledge—the phonographic* method—not the slightest positive evidence could be obtained of the faintest trace of hearing One of these cases, a boy aged sixteen months, after his third treatment could hear the sound made by turning the knob of the door, not seeing it opened Another, a girl of 4 years, in whom I could not demonstrate the least vestige of hearing, has developed not only the power of hearing certain sounds, such as the creak of a spigot, the bark of a dog, the noise of a door knob's motion, but has in addition developed the power of imitating some sounds When her father, in playing the violin, strikes the A string, she invariably imitates it, even when the instrument is not in sight She also repeats the A note as it issues from an organ and when sung This peculiarity of the ear becoming awakened first to certain tones, is most frequently explained on the supposition that the terminal ends of the nerves are in communication with its individual vibrating fiber, each fiber responding to but one tone and independent of each other as the keys of a piano, but that of these fibers, one or more as the case may be, is the most active, free and healthy and therefore the sooner responds to treatment It can also be explained on the telephone theory of the production of the sensation of hearing In the ordinary telephone we find that by increasing the external resistance we can blot out certain tones, and that by shortening the length of the wire or increasing its cross section, that these tones gradually appear more distinctly as the resistance is diminished Applying the same thought to the ear, the remedial effect of the treatment is to relieve the nerve of its external resistance, the inefficient conducting apparatus, and that although the labyrinth participates early in the improvement, yet certain notes being more easily perceived by the cerebral center—just as the telephone translates some sounds better than others—are the first to appear as conscious impressions of hearing, while others take a much longer treatment to develop, appearing only when the external resistance is much diminished or at a minimum My belief as to the favorable effect is, simply, that in many cases of deafness occasioned, probably, by the want of the functional activity of the internal ear structures, the ear fluid becomes more or less irregular in density, and of a somewhat unyielding consistency—the fluid being less liquid and because of gravity it becomes more dense along the lower borders, by reason of the natural attraction of the solid tissues for the more dense particles, it becomes more consistent in approximation to all the surrounding membranes In consequence of this, adhesions more or less firm appear and bind the somewhat thickened fluid particles to the otoliths and membranous linings, the semicircular canals and the cochlea This process is probably twofold, not only as a consequence of disease, but also the result of an increased pressure exerted on the fluid by the forcing inward of the stapes and membrane of the round window Undoubtedly in some cases, the fibroplastic changes occurring in the middle ear extend early to the internal ear and produce an effect there precisely as portrayed above These pressure changes and those brought about by functional inactivity, as well as those produced by the extension of fibroplastic inflammation, all tend to thicken the labyrinthine fluids, to vary the density of different parts—increasing all parts in immediate approximation with the lining membrane—and also by their effect on the nerve, dull its sensibility, and by affecting the blood vessel supply reduce the normal nutrition

The massage properly applied relieves the pressure on the internal ear, causes an active disturbance and circulation of the labyrinthine fluids, stimulates the peripheral ends, as well as the body of the auditory nerve, and improves the blood circulation

So confident am I now in regard to the treatment of labyrinthine disease, that whenever I can find good bone conduction I feel that there is no insuperable obstacle in the way of improving the hearing I consider that if the nerve center, the nerve itself, and the nerve terminals be intact, that there is often not only hope, but fair reason for believing that the treatment will be successful even when the other structures are involved The problem is, so to treat the ear as to allow external sounds to, in some manner, reach the terminal endings As indicated before, massage applied as outlined here, also exerts an effect on the Eustachian tube The constant to-and-fro motion of the ear membrane and of the middle ear contents forces down into the closed Eustachian tube a column of air which acts as a wedge and, while each motion of this column is imperceptible, it will be found by experience that few indeed will be the cases of such closure which do not succumb in time to this treatment

The method is one so easily applied, so devoid of pain and discomfort, so rational as to its application, and promises so much in fields which have up to the present been practically inaccessible, that I feel sure that if used fairly and impartially it will commend itself more and more as we grow experienced in its use I believe ear disease will lose much of its stubbornness and the treatment much of its unsatisfactoriness as this method is developed I do not believe that my method is by any means perfect, but hope that with the aid of other workers in this field of medicine, we may in a few years be able to present such a system of ear therapeutics founded upon a rational mechanical basis as will serve to relieve thousands who by our present methods are incurable

DISCUSSION

Dr F T Rogers, Providence, R I—said that his experience in the use of phono and pneumo-massage prompted him to add his testimony to the inefficiency of the treatment He had used it for several years, making as critical a study of each case as he was able, and he had not seen improvement in over 1 or 2 per cent, while in a larger percentage there was actual impairment of hearing In perhaps 6 or 8 per cent there was partial relief of tinnitus The theory of aural massage is a fascinating one, but we should not forget that in carrying it to a greater degree we' are advising as a therapeutic measure a procedure which causes boilermaker's deafness It is a method of treatment which by most aurists has been used only to be condemned, and Dr Lautenbach is to be congratulated upon obtaining results which have not been verified by published reports of others

Dr J S A Nichols, of New York—stated that his experience with pneumo massage had been disappointing, and it had been rather extensive It was true that improvement took place, but in the vast majority of instances it was only temporary, and the patient returned after a time with tinnitus and hearing unimproved In one class of cases, massage was certainly contra-indicated—those where there had been a suppuration with a subsequent cicatricial membrane In regard to the removal of the ossicles the sum and substance of all the discussions seems to be that the improvement in hearing was not permanent, but when healing took place the hearing was as bad or worse than formerly

Dr Alderton, Brooklyn—Reported a case of removal of hammer and incus in a young lady, the subject of chronic suppuration, in which the suppuration was cured and the whisper advanced from two feet to twenty-two feet This improvement has kept up and the patient has been under observation for three years The Doctor deprecated the operation of ossiculectomy in cases of chronic catarrhal otitis media, but recommended it very highly in cases of chronic suppuration of the middle ear, where the tuning fork reactions, etc, showed the internal ear to be in normal or good condition, and where the hearing has been so reduced as to warrant the supposition that operative interference can not make the hearing worse and must, if anything, make it better

THE SURGICAL TREATMENT OF CHRONIC SUPPURATING OTITIS MEDIA

Read in the Section on Laryngology and Otology, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md May 7-10 1895

BY J H BRYAN, M D
WASHINGTON D C

It is not my purpose in this short communication to go extensively into the subject of the management of cases of chronic suppurating otitis media, but only to emphasize a form of treatment that has of late received a decided impetus, and which in many cases offers us the only rational treatment for this obstinate affection, one that is considered so unsatisfactory by many that we, who have these cases to treat, are condoled and sympathized with for being willing to devote so much time in the treatment of affections, the final issue of which is so uncertain

Much depends upon the seat of the inflammation, whether it is in the epitympanic or in the lower tympanic cavity, they being characterized by somewhat different symptoms In suppurative inflammations affecting the epitympanic cavity or attic, the perforations are situated in the membrane flaccida or the membrane of Shrapnell, and they are situated either anterior or posterior to the short process of the malleus Perforations situated in the membrana always mean caries of the ossicles, which may also be associated with caries of the surrounding walls of the middle ear Owing to the high situation of these perforations, drainage is not readily obtained, and a radical operation here is therefore more frequently called for than in those cases where the inflammation is confined to the lower tympanic cavity, in which case the perforation is generally situated in the anterior or posterior inferior quadrant of the membrana tensa, and permits of much freer drainage While caries is frequently the cause of the prolonged suppuration in this form of abscess, it is not so generally present as in those cases where the inflammation is confined to the attic In nearly all cases of prolonged suppuration of the middle ear, the ossicles will generally be found to be in a more or less state of caries The bonelet most frequently found diseased is the incus, then the malleus, and finally the stapes which has the power of resisting attack longer than the others With the exception of its head it is rarely affected

If after giving the patient a fair trial of all the well-known methods of instilling and insufflating antiseptic medicaments into the middle ear the suppuration still continues, then it is our duty to resort to more radical measures which consist in removing the necrotic membrane with its carious ossicles The aurist must decide for himself when he has exhausted the milder measures before subjecting the patient to an operation I believe in many cases the sooner it is done the better, as it is our duty to arrest the suppuration in this cavity as soon as possible, by so doing we not only preserve the hearing, but prevent the serious sequelæ of this affection that so frequently result disastrously to the patient's life

The operation for the removal of the membrana tympani and the ossicles removes all septic material from the middle ear, permits of freer drainage, and enables us to apply the antiseptic lotions directly to the inflamed mucous membrane of this cavity

The duration of suppuration after the excision of the diseased membrane varies in different cases, but depends to some extent upon the length of time the abscess has existed, and the depth to which the carious process has extended into the surrounding bony walls In the case I have to report, the discharge ceased at the end of a week, and at the expiration of three weeks after the operation the drum membrane had been almost entirely reproduced, only a small opening remained in the upper part of the membrane about where the short process would be if present

While in many cases of partial destruction of the membrane it reproduces itself with great rapidity, still such a rapid redevelopment after total excision as in this case is unusual The cessation of suppuration can be explained by the fact that caries was limited to the ossicles and the most superficial cells of the attic

The benefits to be derived from this operation are well illustrated in the report of the following interesting case

Miss —— consulted me Sept 1, 1894, giving the following history she stated that her general health has always been excellent until the present time, when about 10 years of age she suffered from an abscess in the left ear, the discharge from which continued for about six months, and when this ceased she was quite deaf Since that time she has had frequent inflammation in the left ear, accompanied by pain, when she caught cold, but not going into the suppurative stage until the present attack which commenced about August 1 of the present year At this time she was not in very good general health This attack began with severe pain in left ear accompanied by nausea and giddiness, but there was no discharge until seen by me September 1, when pus was observed for the first time On examination, there was found to be a diffuse inflammation of the external auditory canal due to furuncles, with a small quantity of pus exuding from the canal She complained of intense pain both in the external auditory canal and in the deeper parts of the ear, radiating in front and at the back of the auricle over the mastoid region There was some swelling in front of the auricle just above the tragus, but there was no pain or tenderness over the mastoid region The swelling in the external auditory canal was freely lanced and hot fomentations applied This was not followed by much relief as to the pain which seemed to increase and it was accompanied by nausea, vertigo, double vision and vomiting Although the swelling in the canal subsided somewhat after the scarification there was still too much tumefaction in the deeper part of the meatus for the membrana tympani to be visible The next day, however, after the continuous applications of hot fomentations there was a profuse discharge, followed by great relief as to pain and the other threatening symptoms With the appearance of the pus secretion the swelling in the canal continued to subside, and a polyp about the size of a large pea was observed blocking up the canal This was removed with the snare October 5, and it was found to spring from the middle ear, projecting through a perforation in the membrana Shrapnelli, just posterior to the short process of the malleus The removal of the polyp was followed by a free discharge of thick caseous pus Two days after the removal of this growth I removed a large cholesteatomatous mass from around the perforation which was pressing against the drum This was followed by marked relief as to the pressure symptoms which up to this time were still very marked The membrane was deeply swollen and congested, especially in the region of Shrapnell's membrane in which the perforation was confined

The secretion of pus continued quite profuse and caseous in character for about a week or ten days after the removal of the polyp, but under the continued use of hydrogen dioxid it gradually diminished in quantity, and became more fluid in character On mopping out the canal with a cotton tipped probe, rough bone was detected around the margins of the perforation which had increased somewhat in size since the subsidence of the inflammation The naked probe failed to reveal any rough bone After treating the ear locally for six weeks with antiseptic lotions with no material change in the flow of pus, it was deemed advisable to remove the necrotic membrana tympani and the ossicles which were believed to be the seat of the caries

November 9 Before the patient was sent to the hospital the hearing distance was as follows watch heard only on contact, whisper voice not heard, loud isolated words were heard with difficulty at five feet, tuning fork, bone conduction longer and louder than air conduction

November 15 The patient was admitted to the Garfield Hospital, and on the same day under chloroform anesthesia the necrotic membrane and ossicles were removed according to the usual well recognized method Owing to the adhesions that had formed between the drum membrane and the walls of the middle ear, and the profuse hemorrhage, its removal was attended with some difficulty The hemorrhage was finally checked with a 4 per cent solution of cocain There was only a small portion of the incus found, the remainder having disappeared, and the head of the malleus was honeycombed by the carious process The stapes, as far as could be ascertained, was in good condition and was left in position After the removal of all diseased tissue from the middle ear, the canal was mopped out with a solution of bichlorid of mercury (1 to 6000) and the canal lightly tamponed with sterilized cotton

November 16 During the night there was considerable pain which passed off toward morning, and also some nausea and vertigo The discharge during the night was sufficient to necessitate changing the tampon twice

The ear was cleansed daily, iodoform and boric acid insufflated, and the canal tamponed

November 21 She was well enough to leave the hospital, and came to my office for treatment There was very little discharge present, not enough to moisten the tampon The giddiness still remains, but to a much less degree, complains of a tremulousness and difficulty in getting a deep inspiration Hearing distance for isolated words, conversational tone, sixteen feet, watch heard at one inch, Galton whistle heard sixteen feet and over

November 27 No discharge, giddiness has entirely disappeared The drum has been reproduced to more than two thirds of its full extent

December 5 Owing to a severe cold which the patient contracted, there has been a slight discharge of mucus through the small opening in the membrane, which gradually passed off under the local applications of salicylic acid, gr xx to alcohol ℥i

May 8 There has been no return of inflammation and the patient is enjoying comfort with a comparatively serviceable ear, the hearing distance for the watch being two inches, and for the voice, conversation tones, about five feet

This operation offers many advantages to the patient when the caries is confined to the middle ear cavity and the superficial cells of the attic, but when the trouble is more deeply situated, as in the deeper parts of the attic and antrum, then the more radical operation of Schwartze, Von Stache, or some modification of these must be resorted to

818 17th Street

DISCUSSION OF DR TURNBULL, LAUTENBACH AND BRYAN'S PAPERS

Dr H V Wurdemann, of Milwaukee, Wis, in opening the discussion said, the discussion of subjects such as dealt with in the papers of our colleagues, Drs Turnbull and Lautenbach, is apt to resolve itself into an experience meeting I can only corroborate the frank statements of the former gentleman as to the prognosis to be given to patients regarding the results to be achieved by treatment, in fact, on the acceptance of every patient for treatment of chronic aural catarrh, I give a brief clinical lecture on the natural history of this disease and tell what may be expected, judging from the percentages of cures or of cases in which relief is given from previous experience of myself and others It seems to me, however, the results of treatment by the various forms of massage are better than those given by Dr Turnbull My experience has been that fully one-half the cases that apply within a year after the beginning of tinnitus are practically cured by a course of treatment Others are greatly relieved and fully 75 per cent of all cases in all stages acquire benefit by simple treatment However these cases should receive continuous treatment for a sufficient length of time to remove nasal and pharyngeal congestion or catarrh and to secure patulency of the Eustachian tubes The patients are warned that it will be necessary for them to return in the spring and fall of each year for a few visits when this has been obtained, after a dozen or twenty-five treatments Such that do are benefited and their disease held in check in the greater majority of even the worst cases I have patients now under treatment who have been under my care for six years, and who hear as well or better than they did when they began with me, even though the disease, before the inception of the treatment, had been progressing We can not rely upon one form of treatment to the neglect of others There are several kinds of massage, i e, with the Siegel ‘otoscope,” the Luca spring probe, and direct mas sage with a cotton-tipped probe applied to the short process of the malleus, and internal massage made after the method I described one year ago before this Section at the San Francisco meeting (See Journal of the American Medical Association, Oct 13, 1894) By this method the administration of vapors of various natures is combined with vibratory massage of the Eustachian tube and lining of the middle ear, the drum-head and ossicles by intra-tympanic massage through the catheter Attention to the nose and throat has been made in all these cases, in our lake climate there is a class of cases coming under the head of "apex catarrh" as described by Howard Straight, of Cleveland, in which there is congestion of the apices of the lungs and slight chronic bronchitis in connection with the catarrhal trouble of the upper air passage These are greatly benefited by the administration of creasote in moderate doses I find that nitro-glycerin in some cases has a marked influence on diminishing tinnitis and vertigo, and is worthy of trial In regard to "phono-massage," as described by Dr Lautenbach, would say that my experience has been limited and on account of the diagreeable effect of the sounds of the vibrometer in some cases the patient has absolutely refused to go on with the treatment after one sitting The middle ear catarrh is certainly amenable to mechanical treatment in the majority of cases in which the labyrinth has not been involved In the latter cases I am skeptical as to the results to be obtained by any form of treatment and I am sure these cases will always prove to be incurable A certain proportion of cases where the middle ear is alone involved or where there is but little sclerosis of the labyrinth after due trial for sufficient length of time, i e, for several months of simple treatment by pneumo-massage and vapors, together with attention to the upper air passages, are subjects for operation I have had a number of beneficial results from operations on this class of cases There have been several dismal failures, one of which I reported to this Section at the Detroit meeting (See Journal of the American Medical Association, Oct 22, 1892), in which my subject was made stone deaf by the operation In another, I failed to extract even the malleus, which on account of the bleeding and narrowness of the canal was dislocated into the attic and could not be removed I can not ascribe this to want of experience for I have done this operation over sixty times, the greater majority of the cases, however, being in chronic suppuration of the middle ear I wish to call attention to the difficulty of the operation and to the necessity for proper knowledge of the anatomic relations of the parts In many cases the operation is done chiefly by the sense of touch, on account of profuse bleeding, which is especially noticeable when the patient is under ether anesthetization

Dr S MacCuen Smith, of Philadelphia—The treatment and care of patients suffering from a chronic non-suppurative inflammation of the middle ear has long been a perplexing subject, and upon which the literature has been very voluminous, however, the methods of treatment as advocated by various authors and authorities have been so contradictory in their application, and vary so markedly in the apparent results obtained by different investigators, that we find a majority of the medical profession of to day just about as skeptical of the benefit to be derived from treating this class of cases as they were in former years Nevertheless, within the past few years some notable advances have been made in the way of treating the large and increasing number of our population afflicted with a chronic catarrh of the tympanum

From the paper just read by Dr Turnbull, we must all be impressed with his earnest effort to show that considerable has been accomplished in the way of operative interference in this class of cases Within the past few years I have excised the membrana tympani, malleus and incus, one or all, in a large number of patients, and I must say that my experience thus far as to the benefit derived therefrom has been on the whole quite disappointing This large series of operations was undertaken purely as an experimental matter with a hope that I might be able to contribute some practical information on a subject that has its pro's and con's ardently advocated in almost every medical meeting the world over To an extent at least, I think I have succeeded in establishing a few facts, although sufficient time has not yet elapsed to enable me to make positive assertions After operations of this character almost every case will be greatly improved in hearing, but this as a rule steadily decreases until the patient is in about the condition he was before the operation Some cases have been reported in which the hearing power was considerably reduced below the point it recorded before operation, but my experience does not bear this out In a few of my cases the improvement in hearing has continued over a period of three years or more, and I have every reason to believe this improvement will be permanent

I am familiar with two of the cases quoted by Dr Turnbull, and am sorry that more of my patients did not receive similar benefit Not long since, a patient upon whom Dr. Burnett operated (the wife of a physician) came under my notice and I was much impressed not only with the great improvement in hearing she had maintained for a period of two years, I think, but also her entire freedom from tinnitus and vertigo In conclusion, I would say that I believe the operation under consideration is capable of giving good results when proper cases are selected for its application That inasmuch as the percentage of patients are so very small, in which the hearing is materially benefited, we are not often justified in advising the operation when deafness alone is the only indication for interference However, I believe the operation to be a sound surgical procedure when it has for its object the relief of severe tinnitus and staggering aural vertigo, of course after other recognized methods of treatment have failed to give relief

I wish to say that I have never seen any alarming symptoms or complications accompany or follow this operation As regards the efficiency of pneumo-massage, as advocated by Dr Lautenbach in these non-suppurative cases, my experience has been rather limited, but judging from the results of several of my professional friends, who have had extended opportunities for observation, I am inclined to believe this method of treatment to be a good adjunct to the general line of treatment, of more or less value, but like most agents, quite limited in its usefulness

Mr Chairman, in answer to the note sent you by one of my hearers, in which the question was asked "Can you see the stapes in every case, and in what percentage of cases can it be removed?" I would say that my experience with the stapes is limited to but one case, and in this its removal or partial removal was entirely accidental, and as the patient suffered from severe vertigo for several weeks afterward, I would not care to have a repetition of the accident, much less voluntarily remove it I have been always been opposed to any interference with the stapes, and believe *that those who formerly advocated its excision have now* entirely abandoned such radical measures

Dr Alderton, Brooklyn—Dr Alderton's experience in the removal of the ossicles for the treatment of chronic catarrhal otitis media, both for the relief of deafness and of tinnitus, has been such as not to warrant him in advising the operation of ossiculectomy in such cases He recalled one case in which the operation was done under rigid antisepsis in which the hearing for the whisper was advanced from one foot to sixteen feet +, and yet considerable post-operative irritation manifested itself, suppuration taking place with more or less periostitic pain When these symptoms subsided the membrana tympani was gradually reformed with return of hearing to the condition previous to the operation, with, in addition, a feeling of great stuffiness in the ear Three several times was the reformed membrana tympani excised with similar results, the patient then being advised to rest content, as the danger of causing mastoid inflammation seemed to increase with each attempt The whisper remained about the same as before the operation, and the feeling of stuffiness in the ear very marked and unpleasant In thinking over the case, were the operator to interfere once more he would by Hartman's chiseling instrument remove the upper and posterior segments of the annulus tympanicus in the hope of preventing the regeneration of the membrana tympani and so maintaining the improvement in the hearing

Alderton, in cases of chronic suppuration strongly advises the removal of the ossicles in all cases that have not yielded within a period of three to six months to systematic treatment and in which the nerve has been found by the tuning fork and Galton tests, to be in a normal or nearly normal condition, the hearing being much impaired but counsels that caution be exercised in those cases in which the hearing is only moderately or very little impaired, since in these cases it is perfectly possible to have worse hearing after than before the operation It then becomes a question as to which the patient most wishes or which is most necessary to him—the integrity of his hearing or the cure of the suppuration, and as we can not promise a cure of the suppuration invariably in these cases, it is wrong to hazard the amount of hearing he still retains In *appropriate cases* coming out of the above indications great improvement can be hoped for In one case, Alderton removed the hammer and incus in a young girl for O M.P C the whisper being improved from two feet to between twenty and thirty feet, the suppuration at the same time being cured, and this improvement has been maintained for over two and one half years

In answer to a question by Dr Fulton, Dr Alderton thought that failure to get the incus in O M C C, though unavoidable in a certain proportion of the cases, was due to the removal of the hammer before first disarticulating the incudo stapedial joint He advised, first, making a flat of the posterior quadrant of the membrana tympani, the inferior border remaining the attached border, thus exposing the incudo-stapedial joint usually, then cutting the stapedius and the articulation The tensor tympani and the anterior and posterior folds should now be severed, the patient's head elevated, the malleus extracted, when usually the incus will come into view, or may be reached with a Hewit or Weber hook, or the incus may be removed before extraction of the malleus Plugging and cocain should be used to control the hemorrhage, ether anesthesia being used

In answer to a question of Dr Würdemann, Dr Alderton uses McKay's or Hartman's forceps for the extraction of the malleus The McKay is used in all cases of narrow or tortuous canal Also, though he has occasionally been successful in its use, he does not think that cocain anesthesia is sufficient in most cases of O N C C, though more apt to be so in case of O.N F C

Dr Alderton's experience in the use of phono and pneumo massage has been rather unhappy, as he has not only failed to benefit his patients but has often produced unpleasant symptoms as vertigo tinnitus, etc

Dr Lautenbach—In regard to Dr Würdemann's results from massage he has as he stated, employed it through the Eustachian tube with indifferent results He has probably used it for a very limited period at each sitting from a fraction of a minute to a minute only When used for such short periods good results are obtained only in the mildest cases. Massage to be effective must be used at varying pressures from 50 to 200 motions per minute, and must be continued for from five minutes in mild cases to as much as one to two hours in old, resisting, adhesive troubles As for Doctor's deaf and dumb brother, it would be most interesting to know whether he hears or feels the sounds spoken of If he hears them I am sure some improvement awaits the proper employment of massage as all of my deaf and dumb patients treated by me within the past year (six in number) show some improvement in hearing

Dr Turnbull in his paper gives us some cases operated upon in whom the watch hearing distance varied from five to seven inches—these patients were suffering with tinnitus and vertigo, unless these last two symptoms were most severe—so severe as to materially interfere with the patient's ability to earn a livelihood or to so discomfort him as to render life a burden, suggesting suicidal thoughts—I would not consider myself justified in performing an operation and risk the loss of an amount of hearing which is rarely present after an ossicular operation A case interesting in this connection is that of Mrs Hunter, who after two examinations by an ear specialist was told that in order to relieve the tinnitus and vertigo nothing else but an operation would suffice When she came to me, in addition to the above symptoms, she showed a marked degree of deafness being able to hear the watch only on contact As the result of phono pneumo massage the vertigo completely disappeared, the tinnitus only appearing in a mild form when she had a head cold, the hearing in the one ear is watch thirty-eight inches, the other thirty-six inches Is it conceivable that this result could have been obtained by an operation? Is it not more likely that even though the vertigo and tinnitus had disappeared, the deafness would have remained? Had massage failed in this case, the ear instead of being injured by the delay, would have been rather improved by it, as the mobility of the joints being increased, the operation can be more thoroughly and carefully done

Dr Turnbull has remarked that he has not known of a case of mastoid disease following or caused by the operation I recall a case of a young woman Miss Ida F, of Brownsville, Tenn, upon whom I operated on one ear about April 1893, and the other ear November, 1893, the extreme constant, uncontrollable tinnitus indicating the operations She left Philadelphia and went to Louisville, Ky, about the middle of December, 1893, apparently in perfect health Shortly after Jan 1, 1894, I heard that she had developed some ear disease, and later on I received a letter from Dr *Cheatham of Louisville*, informing me that she had developed a mastoiditis appearing first in the ear operated upon last, which later affected the other ear Despite prompt opening of the mastoid cells and thorough cleansing and antiseptics, the patient died While I can not be sure there was the slightest direct connection between the ossicular operations and the mastoiditis, I yet have a strong belief that the operation predisposed *to the inflammation* as it deranged the structures so as to render them more susceptible to deleterious influences

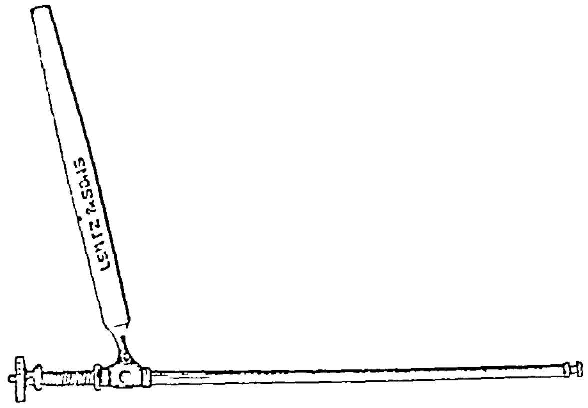
Dr Rogers is quite correct in his assumption that massage may do harm Many of the instruments are crude and unscientifically constructed In this paper I have but spoken of the results obtained from the various machines of my own construction I know of a prominent specialist who has completely abandoned massage methods because of the bad results he obtained from the vibrometer He assures me that in one case he is *positive that* he produced a hemorrhage into the labyrinth, with total loss of hearing, by the use of this instrument

In reply to Dr Nichols' criticism that he can not see how the influences that occasion boiler maker's deafness can be curative in thickened and *plastic middle* ear conditions, I will say that in the one case the noises are continuous loud and oppressive, and act as irritants whereas in phono and pneumo massage, the therapeusis depends upon the regularity of a mild stimulation of the ear structures and its nerve sufficient to gradually break up adhesions and restore the normal circulations, but not enough to result in the throwing out of plastic secretions

Dr Alderton has called attention to a class of cases in which ear massage gives the best of results I refer to cases of old suppurative disease *If the perforation* be filled up by cicatricial tissue or if the perforation be present the effect of *massage* treatment results almost invariably in a *marked* improvement in *hearing*—the improvement being more easily brought about and greater in degree than is present in an intact drum head with an equal degree of eafness—the reason for the greater improvement being the act that the massage exerts its influence directly on the abyrinth through the oval and round windows without the ntervention of the drum head and ossicles Where the rum head has healed over, the cicatricial tissue allows of a reater to and fro motion within the middle ear without the ntervention of the ossicles

Dr Alderton has criticised the proposition that an increase n the circulation of the middle ear results in curative influnces The diseased ear with an increase in the quantity of ibrous and plastic tissues can be compared to a dislocated houlder joint After the joint has been replaced it is kept uiet for a long time and when the ligaments are healed he joint is stiff Effusions have occurred in the muscles nd tissues about the joint, the circulation is impeded To ause absorption of these effete and inflammatory products he joint is carefully exercised and the muscles kneaded n time the circulation is restored and inflammatory prod cts removed the muscles and joint resuming their normal unctions So with the ear, the inflammatory deposits as ell as the deposits occasioned by disuse, calcareous and thers, are present in an ear in which the functional action nd circulation are below normal By increasing the funcional activity artificially, we restore the circulation and reiove the deleterious deposits in just the same manner as he masseur cleaned out the shoulder joint

Drs Alderton and Fulton have both called attention to he difficulty of performing ossicular operations, and of the ability of losing the incus high up in the attic Dr Wurdeiann I believe, has told us of a case in which the malleus lipped up so as to elude removal The danger is an ever resent one unless we have some way of firmly holding the ialleus and then of opening the incudo stapedial joint and hen raising the handle of the malleus outwardly and upard, while the detachment of the malleus and incus is acomplished I succeed in doing this by a forceps I devised ome two years ago, and which I believe is being used by)r Cheatham of Louisville Ky It consists of a rod with a oothed end presenting against a corresponding toothed end f an inclosing tube, the distance between the toothed ends eing regulated by a nut overcoming the pressure of a spiral pring, the action of this spring being to keep the toothed lades apart After the drum membrane is detached, the orceps is inserted and the handle caught firmly as high up s possible, when the nut is screwed down sufficiently tight o hold the handle of the malleus, and yet not so much as to rush it Now having the malleus under control by cutting he tensor muscle and then drawing the forceps slightly utward, raising it at the same time, the incudo-stapedial oint is readily reached and these bones disarticulated—the icus and malleus attachment can then be cut and these ones removed I always use general anesthesia for these perations, never depending on a local anesthetic



That the method does influence the labyrinthine structures vould seem to be proved by the fact of the very favorable esults obtained in perforation cases In order to prove the roposition more thoroughly, I will quote the case of a deaf nd dumb girl, Miss E G , 12 years old who has not been able o hear at all since she had a severe attack of scarlet fever vhen two or three years old She has been examined by Dr Burnett who pronounced it a case of labyrinthine disease, of a opeless nature By the aid of phono-pneumo massage she as been made to hear and even to distinguish many voice ounds and is also able to speak with her family and friends She has developed to such an extent that she is now a pupil n one of the public schools of Philadelphia Again, as a roof of the influence on the labyrinth of such treatment, I ecall a girl, Miss A G H , of Camden, aged 24, who in 1885 ell down a hatchway striking the right side of her head She was unconscious for four or five hours and since her fall has not heard in the right ear In the belief that some of the ossicles had been broken or detached, in March, 1888, I removed the malleus incus, and as these seemed in good position the stapes as well The operation had no effect on the hearing, the tinnitus being but slightly diminished—no hearing in the right ear whatever In 1890 she consulted Dr Knapp of New York, who pronounced the case hopeless In 1894 she returned to me By all tests—phonographic tests with all varieties of sounds—the hearing remained negative There is a secondary membrane present I have been treating her by phono and pneumo massage since then with the result that she hears the watch on contact, and sometimes when just removed from the ear

As before said, I consider this method as offering a new path by which we can accomplish often good results for hearing as well as tinnitus and vertigo, and it does it by putting the ear in a more healthy and natural condition—that it affects not only the drum head and ossicular chain, but the labyrinth and auditory nerves as well, and that this treatment does not in any way interfere with operative measures should they later be deemed necessary

EVISCERATION OF THE EYEBALL

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore, Md , May 7-10 1895

BY L WEBSTER FOX, M D

PHILADELPHIA

This operation must not be confounded with abscission, although both are somewhat similar in character The latter operation has been abandoned by the majority of ophthalmic surgeons on account of its risks

Evisceration first consists in excising the cornea and thoroughly removing the contents of the globe, and replacing the vitreous with a glass globe

Abscission of the cornea, as suggested by the older Critchett, was, probably, the best of this dangerous operation In it, no attempt was made toward emptying the contents of the globe

We are indebted to three English surgeons for bringing evisceration prominently before the notice of the profession practically Mules, of Manchester, first operation was performed in October, 1884 Brudnell Carter, who modified the abscission operation of Critchett some years ago, is now one of evisceration's most ardent advocates, while Bickerton, of Liverpool, performs it preferably to enucleation

Frolich was the first surgeon to perform the evisceration This he carried out in 1881 and named it "excochleation " Muldon and Graefe carried on their observations in 1884 Dubanton followed next with a series of experiments

I shall not review the literature on the subject, as it has been done by my friend Dr G Oram Ring, in a very recent article[1] on this subject My remarks shall be limited to my personal experience with some cases

Case 1 —In 1885 I performed the operation twice in the Germantown Hospital, but the reaction was so great, including tremendous swelling of the orbital tissue and eyelids, great pain, and an elevation of temperature (105° in one patient, 105 5° in a second) I felt that discretion was the better practice and removed both glass globes, later on removing the small stumps of the atrophied eyeballs During the summer of 1893, while in Liverpool, Mr Bickerton brought to my notice three patients upon whom he had recently operated The cosmetic effect was so beautiful that I again became deeply interested and gathered renewed courage at his success I also had the opportunity of witnessing the operation at the Liverpool Infirmary by Mr Bickerton, and also the after treatment To see a skilled operator carrying out the technique of an operation is infinitely better than to follow the details of a written description, be it ever so clear and concise

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[1] Evisceration of the Eyeball" reported in University Medical Magazine, April, 1895

Case 2—The third[2] patient upon whom I performed this operation, June 29, 1894, at the Medico-Chirurgical Hospital, was a young Assiniboine Indian from Montana, now at the Carlisle Indian School He was brought to the hospital by Dr Montezuma to have the eyeballs enucleated on account of pain and much discomfort As near as we could get at the history of the loss of the eye, it was this about three years previously, while on the plains an inflammation of the left eye took place which gradually progressed to an ulceration of the cornea, and finally, to complete destruction of this part of the eye Instead of removing the eyeball, a Mules' operation was performed, under ether The details of the operation were carried out without complication and the patient put to bed

The orbit was examined after twenty four hours—no untoward symptoms were present excepting a slight swelling of the upper eyelid Toward evening the eyeball became somewhat painful, and the patient did not rest well during the night Temperature 102° F , the next day temperature fell to 99° F More swelling of the eyelids appeared, with considerable chemosis of the conjunctiva, but no discharge of pus Chloral and a bromid were given to quiet the pain, and hot fomentations were applied to the eyelids On the third day the conjunctiva became very edematous and protruded between the eyelids, otherwise the patient's condition was about the same as before The internal treatment at this time was hydrarg bichlor, gr 1-32, potass bromidi, gr x, three times daily To the protruding conjunctiva, pressure bandages were applied, which restricted the protrusion The temperature fluctuated about the 99 degree line until July 7, when it fell to normal, and the various inflammatory conditions subsided At the end of the week I removed the stitches from the conjunctiva The sclerotic swelling did not subside for ten days, when the pain disappeared, and at no time during his residence at the hospital did it return

,The operation was entirely successful, affording a beautiful support for the artificial eye, which was adjusted July 18 The artificial eye stood out full and prominent with almost perfect movement—a decided improvement over the old operation of enucleation

Case 3—Operation performed Oct 26, 1894, on a young woman, a patient of Dr Frutchey She had been wearing an artificial eye over the blind eye for several years The result was that she had symptoms of sympathetic irritation, and pain in the partially atrophied eyeball The operation was carried out in detail as above described Upon removing the cicatricial cornea, I found the scleral cavity filled with a bony mass, round and shaped exactly like a small acorn This growth of bone was also a very important factor in the causation of pain The bone was growing larger and the sclerotic coat was restricting its growth, hence the pain The bone was removed without difficulty and given to Professor Laplace for microscopic examination The patient had no untoward symptoms, the temperature ran up to 101 the first day after the operation, and on the third to one degree above the normal line, but no visible change followed—the patient leaving the hospital in twelve days In this case there was no reaction, no swelling of the eyelids and the conjunctiva but very slightly chemotic The artificial eye stands out on a level with its neighbor The movement is perfect, falling but little short of normal

Case 4—A young woman, aged 22 admitted to the hospital on account of an irritable left eye, staphyloma of the cornea, eye useless On account of the repulsive appearance of the eyeball, the patient desired its removal, so as to replace it with an artificial eye The operation was performed under the same antiseptic precautions with little or no reaction no swelling of the eyelids and only a suspicion of edema of the eyelids Owing to a difficulty in matching the right in color, the artificial eye is not quite large enough The movement is exceedingly good

Case 5—Male, age 33 In September, 1884, was struck in the left eye by a brass spring, puncturing the sclerotic, from which exuded a bead of vitreous When brought to the hospital the vitreous was snipped off and the scleral wound was closed by stitching over it the conjunctiva The eye became involved in a general uveitis, with a result of a total loss of vision and slight shrinking of the eyeball I examined this patient about once a year and during the ten years no inflammatory change took place in the eyeball The hyperopia was fully corrected in the right eye and glasses worn On Jan 13, 1892, the following note was made in my case book the sclerotic scar visible, through the conjunctiva no perception of light, total posterior synechia, lens cataractous, no perception of light Tension—1, eyeball manifestly shrunken, no pain nor irritation On Dec 26, 1894, the patient came to see me on account of considerable congestion of the left eye, and slight pain on pressure The result of the examination revealed sympathetic irritation The patient was placed on active mercurial treatment, which reduced the active symptoms, both eyes became perfectly quiet Having had this warning, I advised the evisceration operation, which was performed Feb 2, 1895, at the Medico-Chirurgical Hospital The operation was witnessed by Drs Risley and Carpenter, two members of the ASSOCIATION The case made a very good recovery, with little or no reaction, the only defect is a slight gaping of the conjunctiva and sclera, owing to the central stitches of both conjunctiva and sclera giving way and allowing the glass globe to be visible—the patient is, however wearing an artificial eye, and no inconvenience has become manifest up to the present writing

Case 6—Child, female, age 11 Staphyloma of the cornea of the left eye, due to an ulcer of the cornea three years previously, since then the cornea has developed into a very large staphyloma The operation was performed May 3, 1895 At the present writing the patient is doing well The details of the operation are carried out under ether The eye is thoroughly irrigated with a lotion, which I call formula 1 to designate it from almost the same formula for sterilizing instruments The eyelids are separated with the ophthalmostat The conjunctiva is dissected from its corneoscleral attachment back to about the equator of the eyeball, the muscle not being interfered with, then the cornea is excised—this is best done with a large Beer's knife, as in performing a flap operation for cataract The lower half of the cornea is removed with curved scissors and the contents of the globe are taken out with a small scoop, devised for the purpose Great care is necessary to remove the ciliary body and choroid and the head of the optic nerve, leaving the clean white sclera Mr Carter has devised a rubber bulb which is inserted into the scleral cavity, and inflated with air to produce pressure on the central artery to prevent hemorrhage As this application has not been a success with me, I pack the scleral cavity with sterilized cotton After waiting a few minutes this is removed, and the contents of the scleral cavity again thoroughly irrigated with a hot antiseptic fluid A sterilized glass globe which is best suited to the case, is then inserted with a specially devised instrument, the sclera is split vertically so that the edges may be drawn together and held by fine stitches of catgut, completely hiding the glass ball The orbit is again thorourghly irrigated with the hot solution and the socket packed with sterilized cotton, over which is bound a sterilized bandage, and the patient put to bed

Formula 1 Irrigating fluid

Hvdrarg bichlor	gr 1-50		003
Zinci sulpho-carbolatis	grs xxx	1	80
Aq menth pip	ℨ iv	16	
Aq camph			
Aq destil āā	℥ iv	128	
℞ Sol ft			

The same formula is used for instruments less the hydrarg

In Case 5, instead of using black silk to suture the sclerotic coat, sterilized catgut is used Whether the knot became untied or whether absorption took place too rapidly, causing gaping of the wound and thus allowing the glass ball to press upon the conjunctival suture and cause it to tear, I am unable to say, but from whatever cause the glass ball is visible The patient is now wearing an artificial eye without any inconvenience

When the operation is performed under strict antiseptic precautions very little or no reaction follows, and the results, as Mr Mules states, "are not as disturbing to the normal relation of the parts outside of the sclera" as enucleation Dubanton and Graefe arrive at these conclusions "That the procedure equaled in value enucleation in sympathetic disease, was safer as regards danger of purulent meningitis, can be performed in panophthalmitis, and that, whenever done, a better stump is always secured" If we have in evisceration a method equally as safe as in enucleation, we certainly have in addition the advantage of giving better support to an artificial eye, getting rid of the sinister stare, the enophthalmus and the more perimetric rotation, with no disagreeable mucopurulent discharge so common after enucleation

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[2] Reported in Codex Medicus Philadelphia, November 1894

1304 Walnut Street

DISCUSSION

Dr S D Risley, Philadelphia, Pa—My attention was favorably called to the Mules' operation by Mr Carter, of London, and I have since performed it in one case with very satisfactory results I regard the advantages of this operation to be

1 Improved cosmetic results as compared to enucleation (He exhibited a photograph to illustrate this in which it was scarcely possible to detect the artificial eye)

2 The patient is much more comfortable after this procedure than after extirpation, for the reason that the tears flow off in a natural way and he is not disturbed by the collection of muco purulent discharge in the orbit or behind the artificial eye as is usually the case after excision

The disadvantages are (*a*), the operation is a much more difficult one and should be done only with careful attention to asepsis and antisepsis Its satisfactory performance is greatly aided by the ingenious instrument devised by Mr Mules for the artificial vitreous and the inflated bulb devised by Mr Carter for arresting the hemorrhage within the scleral cup (Instruments were exhibited by Dr Risley) (*b*), a second drawback is the considerable suffering which the patient must undergo for several days in most cases There was marked edema of lids and chemosis of conjunctiva in my case, with slow pulse and temperature of 99 5 to 101 degrees for four days This was treated with continuous application of cold compresses and lead water and laudanum The chemotic conjunctiva was frequently cut, to allow discharge of accumulated fluid After the fourth day, edema rapidly subsided The swelling could not be regarded as an inflammatory reaction, but was probably due to cutting off the anastomotic circulation by the extirpation of the retina and choroid (*c*), it is distinctly open to question whether in cases of imminent secondary panophthalmitis the procedure is as certain a prophylactic measure as excision, since volumes of the infectious microörganisms might thus be outside the sclera in the lymph channels (*d*), in one case in which I had proposed the Mules' operation but did an excision instead, I found the foreign body which had penetrated the ball, lying near the optic nerve on the outside of the sclera, to which it was still adherent I could but congratulate myself that excision instead of evisceration had been performed

Dr G Oram Ring, Philadelphia, Pa—While the first published case of evisceration was by Frohlich in 1881, Mr Henry Powers claims to have seen Hancock perform a number of such operations before that time I have published recently the history of the case of a child 10 years of age on whom I operated and inserted a glass sphere The reaction was very slight and there was no swelling of the lids, temperature 99 4 on the second day after the operation, falling to normal on the third and there remaining The case was one of increasing antero staphyloma in which eserin and pressure bandage had accomplished nothing The tissues of the face surrounding the eye will, I think, develop much more satisfactorily when such an operation is performed on a young child than after enucleation The cosmetic effect is unquestionable Referring to Dr Hotz's case of sympathetic neuritis following evisceration, and to the two published cases of sympathetic ophthalmia of Dr Cross following the performance of the Mules' operation, I believe, with Mr Carter, that as there had not been primary union of the scleral edges, the irritation was not chargeable to the insertion of the artificial vitreous Should there happen to be extensive infiltration into the deep tissues of the orbit compelling deep incision, evisceration with or without glass globes would, as claimed by Dr Noyes, distinctly hinder the satisfactory progress of the case The perimetric measurements of my case were very gratifying Inward rotation 20 degrees, outward nearly 40

Dr F C Hotz, Chicago, Ill—One of the gentlemen has referred to my paper on "Sympathetic Ophthalmia following Evisceration," in which paper I spoke of the better cosmetic results claimed for evisceration and showed by measurements that as far as rotation was concerned, I was not in favor of evisceration I have continued these measurements since, but regret to say that I have not had opportunity to measure the artificial eye set upon an artificial vitreous I am not yet satisfied that the results of rotation are any better by this method As to the cosmetic effects After examining these photographs I do not see that the sinking condition of the upper lid is much better than after enucleation The only point in favor of an artificial vitreous after evisceration is the fact that the socket is full and consequently there is no irritation from tears, so troublesome after enucleation

Dr E Oliver Belt, Washington, D C—I want to ask if anybody here has had any experience in inserting the glass globe into the capsule of Tenon after operation? It seems to me that there you would get rid of the disturbing secretion and have the advantage of a full orbit Perhaps the only thing that would not be as good as evisceration would be the movements of the eyeball

Dr H Gifford, Omaha, Neb—In regard to the movements of an artificial eye after evisceration, I have made some investigations, and while I confess I have been disappointed in some cases I have found decidedly superior rotation, and this increasing directly with the size of the stump upon which the artificial eye was set When placed upon an atrophic ball, I found it so much better that there was no comparison whatever, and hence can not coincide with Dr Hotz on that point Now there is one other point, about the danger of sympathetic ophthalmia after evisceration that was mentioned by Dr Risley You possibly leave germs in the lymph channels about the eyeball I doubt very much whether a few germs in this locality would make the difference you might suppose, upon superficial examination One germ does not make a sympathetic ophthalmia I think the toxins play a more important part in the development of the trouble A point which may account for sympathetic trouble following evisceration is, that no matter how carefully you do it, you may leave some pigmentary cells or fragments of the retina attached to the optic nerve I have experimented upon a considerable number of rabbits and upon examining them, been surprised to find quite a long piece of retina remaining attached

Dr L J Lautenbach, Philadelphia, Pa—Considering only the mechanical appliances used, the glass balls are compressed spheroids with a surface more or less flattened, and on this there is a small depression It is evident if it is desired to preserve the most perfect muscular motion, that the greatest circumference must correspond to the equator of the eyeball and the flattened surface must be anterior, on account of the inner surface of the artificial eye being flattened, the opposite more curved surface fitting accurately at the nerve entrance of the eviscerated ball Now the instrument here shown does not accurately so place the ball If it does not, the ball may yet adapt itself in proper position or be placed there by the operator This suggests an instrument constructed to hold the ball by a vacuum method until it is inserted It consists of a rubber ball attached to a tube which opens out with a sort of lip of soft rubber of a size sufficiently large to adapt itself to about one third the area of the glass sphere To serve as a handle or support, the lip is made rigid by a backing of brass which extends over the rubber tube as well By extracting the air in the bulb and placing the glass ball in proper position in the cup, the ball being firmly held is easily placed in position with its flat side forward If necessary an expanding speculum could readily be devised to hold the sclera open while the ball is being placed in position Another point which suggests itself to me is the thinness of the glass of which these balls are made This piece which I hold in my hand is about one eightieth of an inch in thickness It is evident that in putting in an artificial vitreous we can at least use a weight of material equal to that of a normal vitreous, and could therefore use glass of one fortieth or even one-tenth inch in thickness The danger of breaking by blows would be lessened, as well as that arising from the attrition of the two glass surfaces, even though the stitched sclera lies between them

Dr R C Hodges, Houston, Texas--It strikes me, from my understanding of the technique of Mules' operation, that Dr Lautenbach has his diagram reversed

Dr L Webster Fox, Philadelphia, Pa—I think Dr Lautenbach does not quite comprehend the operation from his remarks upon the instrument The ball is covered by the sclerotic just as a baseball is inclosed within leather The cases I have examined show it to be one hard body with the sclerotic surrounding it and the conjunctiva in front As to the breaking of these balls, the Indian boy of whom I spoke, received a hard blow and the eye was broken but not the glass ball No ordinary blow would break one I am sure

HISTOLOGIC AND BACTERIOLOGIC NOTES ON THREE CASES OF PENETRATING WOUND OF THE EYEBALL, AND SOME OBSERVATIONS ON CERTAIN BACILLI FOUND IN A CASE OF POST-OPERATIVE PANOPHTHALMITIS

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7 10 1895

BY G E De SCHWEINITZ, M D

PROFESSOR OF OPHTHALMOLOGY IN THE PHILADELPHIA POLYCLINIC OPHTHALMIC SURGEON TO THE PHILADELPHIA CHILDREN S AND METHODIST HOSPITALS

PHILADELPHIA PA

In spite of numerous investigations, the exact nature of sympathetic ophthalmitis is not known, nor is the path of the morbid changes which precede the inflammation certainly ascertained, although the older hypotheses have largely been abandoned since 1881, and the disease ascribed to microbic origin Three more or less distinct theories exist

1 *The "Nerve Irritation Theory"* which, in a modified form, has been maintained by Schmidt-Rimpler thus irritation of the ciliary nerves in the injured eye by means of disturbance in the circulation and nutrition, contrived in a reflex manner, is solely responsible for the disposition to sympathetic inflammation in the other eye The longer the changes have existed and the more widespread they are, the better prepared is the soil for action of the inflammation producing injurious agents, which may be microbic or chemic in nature

2 *The "Migration Theory,"* the chief advocate of which is Deutschmann,[1] who thus states it sympathetic inflammation is a process of microphytic origin, progressing in the continuity of tissue from one eye to another, through the optic nerve apparatus, exceptionally a pure chemic process in the first eye may pass by the same route to the second

3 *The Theory of Infection*, which is inclined to accept microbic influence as the most reasonable explanation of the characteristics of sympathetic inflammation, but which is not committed to the character of the microorganisms, the methods by which they enter the circulation, or the path along which they travel

Perhaps a fourth belief ought to be mentioned, viz , that it is not the microorganisms but their metabolic products passing through the lymph streams which are responsible for the disease

If the ciliary nerve idea is disregarded (and there seems the least evidence in its favor, although it is not disproved), Deutschmann's migration theory is the most attractive Unfortunately, however, a number of researches by the most competent observers, notably Gifford, Mazza, Randolph, Limbourg, Levy and Greeff have failed to confirm his views,[2] and there seems little doubt that in the present state of our knowledge, rabbits, as Greeff asserts are useless in this class of experiments, and probably other animals as well (dogs and guinea pigs) Even if germs are conceded as the cause of the morbid process, it would be practically impossible, as Schirmer points out, accurately to determine the route, unless we could recognize them with the microscope and examine the entire cranial cavity and contents of both orbits in a recent case of sympathetic ophthalmitis in man

At present we must be content with the somewhat indefinite "theory of infection "

To the cases of penetrating wound of the eyeball, causing the conditions usually seen in connection with sympathetic ophthalmitis, I desire to add three observations, bearing upon this subject

Case 1 —Traumatic irido cyclitis, with retained foreign body in the left eye, sympathetic serious iritis of the right eye History H A , a man, aged 29 , eleven weeks before admission to the Jefferson Medical College Hospital, was injured by a piece of steel striking the left eye and was sent for treatment by Dr Hollenbach, of Shamokin

The injury consisted of a large cut through the upper ciliary region, which healed with a puckered cicatrix , the iris was inflamed and bound down to the capsule of the lens, and the anterior chamber shallow , the eye was sightless, slightly shrunken, soft to the touch and tender on pressure

There was moderate congestion of the right eyeball, the circumcorneal zone being tinted with a finer injection of pink hue, faint haze in the lower half of the cornea , few dots of exudate on its posterior layers, and one soft posterior synechia Vision was normal, the field of vision uncontracted and the optic nerve intensely hyperemic These symptoms continued to increase in spite of early treatment, until the full development of serious cyclitis was attained The excitor was enucleated and the usual treatment for iritis continued[3]

Anatomic examination the eyeball, beginning to assume a quadrate shape, was opened and the retina was found detached, the ciliary body thickened, the vitreous puriform, and a piece of steel, 12 millimeters in length and 3 millimeters in width, was discovered lying in the long axis of the eyeball, stretching between the posterior surface of the lens and a point near the optic nerve entrance, entangled in the meshes of the detached retina and disorganized vitreous

Microscopically, the following lesions are present the wound of entrance in the upper part of the cornea is closed with young scar tissue (connective tissue and lymphoid cells), covered on the corneal end by epithelium and pierced in its upper part with large blood vessels Passing backward, this plug of tissue divides the iris into two portions, respectively attached on either side, and terminates in a mass of tissue composed of round cells, spindle cells, leucocytes, pigment granules and blood corpuscles held in a matrix of organizing and organized elements (connective tissue), which passes through the length of the globe and ends in the sclera just above the entrance of the optic nerve In the center of this mass is a groove, marking the position occupied by the foreign body

The iris is infiltrated with young cells, the ciliary body shows plastic cyclitis, with foci of denser infiltration near the ciliary processes and in the choroid (somewhat broken and detached) the same infiltration is sparsely present, but scattered through it, especially in the neighborhood of large blood vessels, are numerous circumscribed collections of densely stained round cells

From the head of the optic nerve proceeds an outgrowth composed of the remains of the detached retina and connective tissue containing numerous round cells In the papilla itself and the nerve, darkly stained nuclei are more numerous than in the normal condition, but this is not a marked feature

The ciliary nerves as they pass through the sclera posteriorly, are much infiltrated with young cells lying within the nerves and surrounding them , also with many pigment granules from the choroid

Summary Adherent corneal cicatrix, plastic cyclitis, with infiltration of the choroid (malignant uveitis) , inflammatory exudate in the vitreous , slight papillitis and neuritis of the ciliary nerves

Bacteriologic examination the specimen was not examined for bacteria by culture method , but microscopically in suitably stained section microörganisms are not to be found

Case 2 —Lacerated wound in the upper ciliary region, irido-cyclitis and cataractous lens of left eye, sympathetic uveitis of right eye marked constitutional disturbance History G W W a man, aged 57 nine weeks before admission to the Jefferson Medical College Hospital, was struck in the left eye by a fragment of stone causing a wound in the upper part of the cornea, and came under the care of Dr G H Woods, of Pine Grove Mills

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[1] Ophthalmia Migratoria Hamburg und Leipzig 1889 also Beiträge zur Augenheilkunde x Heft 1893

[2] The accuracy of these is again asserted by Deutschmann in a recent critical review of the subject Beiträge loc. cit

[3] The ultimate result was cure in a month and more than a year after the inflammation the eye was entirely normal

The patient was refractory, and in spite of his physicians' advice, exposed himself to inclement weather Severe iritis followed, which under Dr Wood's treatment subsided in about two weeks Then a relapse occurred, associated with several styes upon the upper and lower lid, vision rapidly failed, and in the fourth week after the accident the right eye began to show signs of inflammation and disturbance of vision From the very first, the patient suffered from violent headache and began to lose flesh The urine contained a trace of albumin Slight derangement of intellect was noted eight weeks after the accident

When he came under my care in the Jefferson College Hospital, the following notes were made V of O D equals qualitative light perception, pupil semi dilated from use of atropin, a ring of pigment on capsule of lens, iris thickened and discolored, numerous dots on posterior layer of cornea, lens partially opaque, and vitreous full of dark opacities V of O S equals light perception, T slightly minus, marked ciliary injection, lens cataractous, anterior chamber deep, wound in the upper part of the cornea, extending up and in through the ciliary region for 1 centimeter, and iris prolapsed into the wound and adherent to its margins

The patient had suffered much pain and had lost forty pounds in two months He was demented and suffering with various hallucinations, there was almost complete anorexia He was emaciated, the skin was harsh and dry, the tongue heavily furred, the bowels obstinately constipated, and the urine contained a trace of albumin

The left eye was enucleated, after consultation with Dr W Thomson and the patient put upon mercurial inunctions, potassium bromid, and hyoscin at night to control talkative delirium The general condition vastly improved, but practically no change for the better had occurred in the right eye when he left the hospital, six weeks later

Bacteriologic examination Dr D Braden Kyle very kindly attended the operation, and as soon as the eye was removed he inoculated, with the usual precautions, serum and glycerin gelatin agar tubes, 1 from the divided end of the optic nerve, 2, from the intervaginal space of the nerve These tubes remained sterile, with one exception, in which a growth of cocci appeared, no doubt due to accidental contamination, as other tubes inoculated from the same place failed to show any growth Suitably stained and serially cut sections were entirely free from microorganisms[4]

Histologic examination the cornea and the superficial epithelium are intact, except at the upper corneo scleral junction where there is a purulent infiltration of the superficial layers The neighborhood of the wound is infiltrated with young cells and wandered-in pigment granules

The iris is swollen to twice its normal size and infiltrated with small round cells, a similar infiltration affecting the ciliary body and processes, in the former structure collected here and there into dense foci Scattered throughout these tissues are many pigment granules and branched pigment cells

From here, the process may be traced to the choroid, throughout which there is a diffuse collection of round cells (purulent infiltration) For the most part the lamina vitrea is intact

The retina is detached and although not free from change, as it exhibits scattered areas of infiltration, it is generally of better constitution than would seem likely from the extensive lesions existing elsewhere

The vitreous, where it remains, is a mass of leucocytes

The papilla is swollen, and contains extensive infiltration of leucocytes and darkly stained small round cells Similar cells surround the distended blood vessels and the increased number of nuclei can be traced along the nerve, the process, however, growing less distinct as it departs from the scleral opening In the intersheath may be found inflammatory material

The ciliary nerves as they pass through the sclera are inflamed, and their sheaths contain many inflammatory corpuscles

Summary corneo-scleral wound containing much uveal pigment, malignant uveitis, the choroid exhibiting an early stage of purulent infiltration, papillitis and infiltration of the optic nerve and its sheath, neuritis of the ciliary nerves

Case 3—Penetrating wound through the upper ciliary region with retained foreign body (piece of steel) in the vitreous, beginning purulent irido cyclitis on the fourth day after injury, no signs of trouble in the opposite eye History S M, a man, aged 25, was admitted to the Jefferson Medical College Hospital on account of an injury to the left eye caused by a piece of steel striking the organ There was a lacerated wound in the upper ciliary region, the lens was partially dislocated and beginning to become cataractous, and there was a slight gray infiltration of the wound The eyeball was collapsed from loss of vitreous and slightly tender to the touch, careful palpation revealing a spot of induration in the upper portion marking the probable situation of the foreign body

Many attempts had been made by his fellow workmen to extract the foreign body, or what they supposed to be the foreign body, which was probably some fragments of uveal pigment, and the wound was no doubt thoroughly infected before the patient presented himself for treatment Two days later he gave consent to enucleation, the first signs of purulent iritis being already present Therefore the eye was removed on the third day after injury

The right eye was normal in all respects and showed no signs of sympathetic irritation

Bacteriologic examination Dr D Braden Kyle very kindly consented to be present at the operation, and under proper precautions inoculations into serum and agar tubes were made from 1, the divided end of the optic nerve, 2, from the intervaginal space of the nerve, 3, from the interior of the vitreous, 4 from the area surrounding the wound of entrance, and 5, from the foreign body Dr Kyle reports as a possibility, that the material from the sheath of the nerve may have come in contact with the nerve itself during the act of inoculation, although precautions were taken to prevent this He also states that the interior of the eye was exposed a little longer than is proper to insure the absence of infection from without

Growths appeared in all the tubes, which proved to be staphylococcus cereus albus and staphylococcus pyogenes citreus In one tube, inoculated from the interior of the eye, in addition to the germs already enumerated, the bacillus pyocyaneus was found Suitably stained sections made by Dr Gray, of Washington, exhibit here and there cocci in the purulent areas None, however, are to be found in the optic nerves or the intersheath

Anatomic examination when the eyeball was opened, the foreign body was found lying in the upper portion, partly imbedded in the ciliary region and extending backward through the whole length of the eyeball The vitreous was purulent, and there was a collection of pus on the surface of the iris and ciliary body

Microscopically, the following lesions are present the remains of the lens fibers are swollen and opaque and between them lie numerous round cells (inflammatory material) The lenticular remnants are attached to the margin of the iris.

This structure is infiltrated with young cells—leucocytes and red blood corpuscles A similar infiltration is present in the ciliary body and the connective stroma of the ciliary processes, in the latter tissue the infiltrating cells being chiefly situated at the inner layers toward the choroid

The vitreous is purulent, being represented by masses of pus corpuscles and leucocytes

The choroid does not exhibit general infiltration, but in the inner layers of the chorio-capillaris are dense foci of round cells

The retina, detached and broken exhibits in a beautiful manner, disseminated infiltration with red blood corpuscles in its inner and outer molecular layers In places the fiber and ganglion layers are not distinguishable and are infiltrated with pus corpuscles similar to those in the adjacent vitreous

The surface of the papilla is slightly infiltrated and there is some increase of nuclei and round cells in the nerve itself. The intersheath is free from exudate

The ciliary nerves, as they pass through the posterior portion of the sclera, do not appear to be involved

Summary acute irido cyclitis (hemorrhagic and purulent), with inflammatory exudate in the lens, beginning purulent choroiditis, hemorrhage into the retina, slight secondary papillitis

Remarks the following points seem worthy of emphasis

1 The *Absence of Microörganisms* in the two cases which caused sympathetic ophthalmitis, (Case 1 and Case 2), the exciting eyes presenting perfect types of the lesions which are capable of originating this disease

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[4] Dr Wm Gray writes in regard to these sections 'The technique was carefully guarded by a control stain on other tissues "

Experience in this line of research has differed widely Deutschmann, for example, has rarely failed to find organisms in an eye enucleated to avoid sympathetic affection of the fellow eye, while Randolph has examined a score of such eyes and has succeeded only once in detecting microorganisms He quotes Ohlmann's examination of thirty eyes enucleated under similar circumstances, bacteriologic investigation being negative in all of them Greeff[6] has carefully investigated fourteen cases of resection of the optic nerve, the period between the injury and the operation ranging from three weeks to three months In each instance the operation was resorted to for fear of an outbreak of sympathetic ophthalmitis No organisms were found in either the optic nerve or its sheaths Similar results have been reported by other observers On the other hand, C E Finlay,[7] in a careful examination of the material furnished by Dr Knapp's laboratory had nine positive results from the interior of the eyeball and two from the intervaginal space, in a total of nineteen cases

Two of the cases now reported are another addition to the negative list, and have value from this standpoint, as well as from the fact that all of the details have been carefully observed from the beginning to the end

In the third case, sufficient time had not elapsed to produce the signs of sympathetic trouble, although the microscopic lesions of the injured eye indicate that such a condition would have occurred had preventive enucleation not been performed It is a positive result in so far as finding the germs of suppuration is concerned, both in sections and in cultures made from the tissues immediately after the operation But this is exactly the result to be expected, the organisms were present, precisely as they would have been in any other active suppurative process Furthermore, proof is lacking (Greeff Schirmer) that the germs of suppuration are the active agents in the production of sympathetic ophthalmitis, although it is just these germs that have been most often found, hence the positive nature of the examination loses its distinction

2 The *Neuritis of the Ciliary Nerves*, especially in the first case A similar condition has been found in a number of instances—Finlay[8] ten times out of twenty-five cases and Berger, whom he quotes, nine times out of fourteen cases Brailey[9] sums up his examination of the conditions of the ciliary nerves in sympathetic disease as follows inflammation of the ciliary nerves is not an essential factor in its production Indeed, it is doubtful whether it can ever be a cause, since it is not infrequently entirely absent, both in the exciting and the sympathetically affected eye and may be present in cases of retinochoroiditis, which neither have produced, nor, judging from their microscopic characters, are likely to produce sympathetic disease

3 The *Constitutional Disturbance in Case 2*—headache, fever, delirium, emaciation—almost a typhoid state One of the chief objections to the theory that the metabolic products of the organisms, and not the organisms themselves, set up the inflammation, is the absence of febrile manifestations, which should be present if toxalbumins are at the basis of this trouble Greeff[10] refers to this point particularly, and largely on its account can not reconcile himself with this idea He quotes Pfluger as having seen a case of sympathetic ophthalmitis with violent headache and fever—an isolated instance which he does not regard of value In the present case, observed for a long period of time, constitutional disturbance was a marked feature, and there seems no other cause except the injury to the eye It is not improbable that careful investigation of the temperature, pulse and respiration in cases of sympathetic ophthalmitis would reveal analogous conditions more frequently than the records seem to indicate

Certain Bacilli Found in a Case of Post Operative Panophthalmitis —D S, a man, aged 55, was admitted to the Jefferson Medical College Hospital, Oct 1, 1894, on account of complete cataract of the left eye and beginning cataract of the right, the vision of the latter being 6–9, with large flocculi forming in the periphery of the lens The light field of the left eye was slightly defective upon the nasal side and the central perception not as acute as might be desired The iris reactions, however, were prompt, and the anterior chamber of normal depth The tension was a trifle below the average resistance Extraction was performed, with the usual antiseptic precautions, on October 5, but before the knife was half across the anterior chamber the patient became absolutely unruly The section was quickly completed and the lens delivered, but owing to the spasmodic contraction of the recti muscles, together with the squeezing of the lids together, a large quantity of semi-fluid vitreous was lost The patient, perfectly uncontrolled, twice swept the margin of his upper lid through the incision

On the second day a gray infiltration of the edge of the wound was visible, and in spite of the most active treatment, proliferation of the vitreous occurred, the eyeball becoming intensely hard and a thick whitish mass appearing between the lips of the wound and in the anterior chamber Twelve days later evisceration was performed and the thick purulent mass from the center of the eye was placed in a carefully-stoppered, sterilized bottle for bacteriologic examination The lower half of the cornea, which had remained clear, was similarly treated

Bacteriologic examination Dr D Braden Kyle kindly undertook the bacteriologic examination and isolated a rod-like bacillus, uniform in size, slightly rounded at the ends, which stains easily with any of the anilin dyes, but better with methyl blue There was also a coccus present, which upon isolation proved to be the staphylococcus pyogenes citreus

In order to investigate the matter still further, cultures were sent to Dr E A de Schweinitz, of the Bio-Chemic Laboratory of Washington, for his opinion, and he returned the following report 'The bacilli are from three to five times as long as broad, often growing in chains, or several of them are joined together They grow on beef broth, and after twenty four hours a pedicle is formed on the surface They also grow on gelatin, but do not liquefy it, and form a white film on agar They do not produce gas in the fermentation tube They slowly coagulate milk, and grow on potato, forming a thick, yellowish reticulated layer They liquefy blood serum slowly"

Archives of Ophthalmology vol xxi p 378

[6] Archives of Ophthalmology, vol xxii p 298

[7] Archives of Ophthalmology vol xxi p 457

[8] Loc cit

[9] Transactions of the Ophthalmological Society of the United Kingdom vol v

[10] Loc cit

In order to test the pathogenic character of this bacillus, injections of an emulsion of the surface growth on agar in beef broth were injected into rabbits' eyes by Dr de Schweinitz, in Washington, and by Dr Kyle and myself in Philadelphia, with entirely negative results, no more irritation being produced than would be expected from the slight wound of entrance When, on the other hand, a mixed culture was employed, namely, one containing the cocci, reaction was prompt and the ordinary phenomena of suppuration appeared

Bacilli have been found in panophthalmitis in a number of examinations, in some cases being associated directly with the development of disease from the pathogenic standpoint

Dr S Poplawski,[11] in an investigation of the etiology of inflammation of the eye after injury, examined twelve eyeballs with beginning panophthalmitis and found bacilli in eight of them, always in the vitreous in the neighborhood of the foreign body There were two forms, a small slender form with no disposition to chain formation, and a large long form

In Finlay's group of cases[12] in one instance a bacillus was cultivated both from the intervaginal space and from the interior of the vitreous The patient suffered from panophthalmitis incipiens as the result of a perforating wound in the ciliary region The following is the description which Dr Finlay gives of this growth "The bacillus was about 7 m long, being rather slender In cover-glass preparations, made from the growth in gelatin, they were arranged in zoogleic masses The bacillus was cultivated in gelatin, agar and potatoes In gelatin it developed with the utmost readiness liquefying it with extreme rapidity almost as soon as it made its appearance, when planted in second and third generations the gelatin would be totally liquid in twenty-four hours In a partially anærobic culture (made by pouring a layer of sterilized oil on the surface of the gelatin after making the puncture), the liquefaction took place much slower, not beginning for months, the growth being somewhat peculiar, from the central stem four peculiar processes were given out, which were arranged crosswise, however, the growth was totally liquefied In agar, the bacillus thrived both in its interior and on its surface, in the latter situation it had a peculiar white waxy appearance On potatoes the growth at first was yellowish, but ultimately acquired a chocolate-brown color, resembling somewhat that of the glanders bacillus " The pathogenicity of this bacillus was established by inoculation into the vitreous of a rabbit

Professor Haab has also found a peculiar bacillus in panophthalmitis to which he attributes a specific character

An interesting case is reported by Randolph[13] in a boy aged 6, following a penetrating wound of the ciliary region made with a piece of wire Inoculation and control experiments proved that the organism which caused the inflammation was the bacillus coli communis, which entered either with the foreign body, or, later, through the wound

The present bacillus can not be classed with those of pathogenic character, as experimentation proved its innocuousness The possibility of contamination with pathogenic cocci must be carefully guarded against in these examinations before ascribing the suppuration to the bacilli, because staphylococci may also be present, as, for example, they were in the case which I report

The piece of cornea, which was removed, is of practically normal constitution, the upper margin containing some lymphoid infiltration Suitable stains failed to demonstrate microorganisms in the tissue

DISCUSSION

Dr R L Randolph, Baltimore—I have been much interested in the paper just read, not only on account of its own value but because the author's investigations were made along a path that I have traveled myself during the past two years Panophthalmitis presents a typical picture of a suppurative inflammation, and one would think that as such the staphylococcus aureus or albus, or certainly some one of the so-called pus organisms would be revealed by a bacteriologic examination Such, though, has not been the case Haab and his assistant, Poplawski, report thirteen cases of panophthalmitis, and in every case a bacillus was found to have been the cause of the inflammation Two years ago I reported a case of panophthalmitis caused by the bacillus coli communis, the latter organism being found in the eyeball in pure culture The paper of Dr de Schweinitz just read, also records the finding of a bacillus It is difficult to explain how the bacillus in pure culture is usually found We know that the conjunctival sac is the resting place for various kinds of bacteria, and it is not likely that simply one kind of organism passes into the eye, and that always a bacillus Maybe the bacilli as a class are of a hardier nature and of more luxuriant growth than the micrococci, and the latter, though present in the eyeball, are crowded out and finally supplanted by their stronger brothers It is singular too, to note the fact that the bacilli found in most of these cases are to be regarded as, comparatively speaking, harmless organisms They are not truly speaking pathogenic organisms, and yet when introduced into the eyeball they produce the most intense and destructive form of inflammation When introduced into the conjunctiva the reaction is insignificant These facts among others go to show that there are many organisms other than the so called pus organisms that are capable of producing suppuration, and that organisms ordinarily harmless, possess sometimes marked pathogenic properties

Dr Harold Gifford, Omaha, Neb —The opinion in regard to the cause of sympathetic ophthalmia seems to be changing, as is the result whenever a new theory is found The pendulum is swinging away from the germ theory and I can not but feel that it is a retrogressive step Dr de Schweinitz found foci of inflammation in his cases,—what caused them? What could produce it but the bacteria or the toxins produced by them? In these eyes the germs were not found, but that does not necessarily show that they had not been present If any of you have examined eyes bacteriologically, you realize how difficult it is to find these germs When staining for germs in the tissues, even the tubercle bacilli is very hard to find There are two points to be considered first, in this region wounds are very common Bacteriologic examinations after experiments upon rabbits' eyes, show that the tissues of the ciliary bodies are most excellently suited to the growth of germs As Dr de Schweinitz remarked, a number of these experiments have failed to confirm Deutschmann's results in this matter I failed to find them in any case in the optic nerve region, but did have them in the ciliary processes in large quantities In the other parts of the eye, you will find them comparatively scarce This may indicate one reason why wounds in the ciliary region are so dangerous How can you account for an inflammation which starts in an eye, creeps along and produces all the disturbances that follow upon any ciliary nerve theory? In regard to the germs found in eyes with panophthalmitis, I have been surprised in many cases at not finding the germ I was looking for, but in a number of them did find what looked like Sternberg's diplococcus, more generally known as Fraenkel's I failed to find them in stained preparations In one case I had a short time ago I found pus germs It seems to me a very important point to bring out here, is the resisting point of bacilli You all know that bacilli are more likely to have spores than micrococci, and are more resistant to antiseptics In noting the precautions taken for operations, I find such remarks as this "Instruments dipped into boiling water" or "put into 2 per cent carbolic acid solution" I think we should not be content with less than five minutes' boiling Pus cells may be killed in one minute, but we should not only take account of these germs, but also the possibility of germs that have spores

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[11] Archives of Ophthalmology vol xxi, p 22

[12] Loc cit

[13] American Journal of the Medical Sciences, N S 106, July to December, 1893, p 440

HEMORRHAGE INTO THE RETINA AND VITREOUS IN YOUNG PERSONS ASSOCIATED WITH EVIDENT DISEASE OF THE RETINAL VEINS

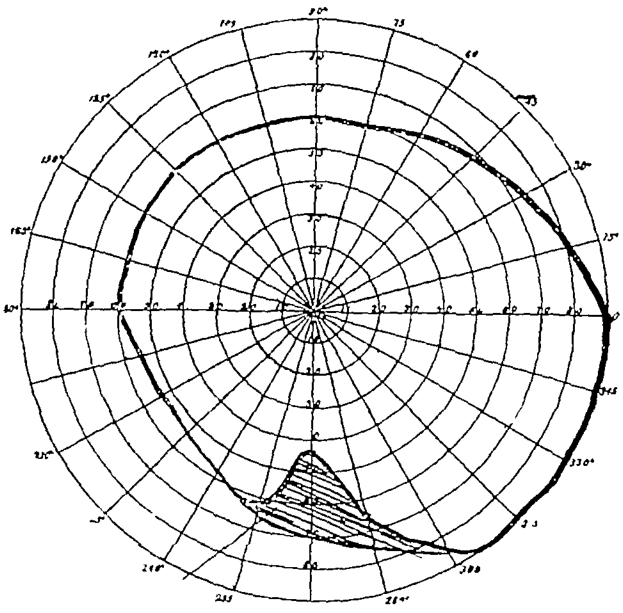
REMARKS ON THE FORMATION OF VESSELS IN THE VITREOUS AND ON THE MIGRATION OF A SUBHYALOID HEMORRHAGE

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association at Baltimore, Md May 7-10 1895

BY HARRY FRIEDENWALD, A B, M D
ASSOCIATE PROFESSOR OF OPHTHALMOLOGY AND OTOLOGY, COLLEGE OF PHYSICIANS AND SURGEONS BALTIMORE MD

Hemorrhages into the retina and vitreous are due to an alteration and loss of resistance of the vessels, to changes in the composition of the blood, to disturbances in the circulation or to a combination of these factors In many cases, however it is difficult to determine the immediate defect which led to the extravasation In the interesting class of retinal and vitreous hemorrhages which occur in young persons between the ages of 12 and 24, which have a tendency to recur and to impair vision to a great extent—in these cases the retinal blood vessels have never, so far as I have been able to find in reviewing the literature, been found to present any signs of disease In the two cases which will be reported in this paper, the disease of the retinal veins was evident and important Beside this, the unique observation was made of a subhyaloid hemorrhage migrating from a point above the macular region to a point below the macula, in so doing, it curved around the macula in such a definite manner as to clearly demonstrate the intimate union between the retina and the hyaloid membrane around the macula—a question about which varying opinions have been expressed Another observation of interest was the development of fine blood vessels in the vitreous, which gradually increased and ultimately grew into large connective tissue masses

Case 1—A, aged 15, a healthy robust young man complained (Dec 12, 1892) of slight pain in the eyes He had noticed the occasional appearance of fiery balls before the eyes for several months There was no history of previous eye trouble, excepting a slight blow on the eye about four *years previously*, *this had not been followed* by any permanent impairment of sight His general health had been excellent, but he had had intermittent fever, first about six years ago, and then again slight "dumb" chills during the previous summer The central vision of the right eye was 8-8 and almost as clear as that of the left The field of both eyes was normal, excepting a small defect in the right, at the *foot* of the vertical meridian (see Field 1) There was slight hypermetropia, (0 5 D.s) The ophthalmoscopic examination showed that the left eye was perfectly healthy In the right, there were numerous peripheral hemorrhages, especially in the upper part of the retina These were all in the *form* of small dots and spots, there were no large extravasations The papilla and the central portion of the retina were *normal*, the arteries presented no decided changes excepting slight fullness and tortuosity, but the veins were much distended and the smaller ones were very *tortuous* The patient was seen frequently but no changes were noted until Jan 3, 1893, when a large hemorrhage was found to have made its appearance in the upper part of the retina, its occurrence had been preceded by the appearance of fiery spots On the following day it seemed to have changed its position to a part lower down in the retina An accurate sketch was made at this time and certain other changes were noted (See Fig 1) The large effusion was now situated above and to the temporal side of the papilla its lower edge was about 1 P D from the upper edge of the very distinct macular reflex The effusion completely hid the underlying blood vessels, which appeared sharply broken off at its margin The upper edge was a perfectly horizontal line The lower margin was made up of irregular curves The arteries appeared unchanged, but decided alterations were noted in the veins The vena temp super which was greatly distended, *ended abruptly in two very small and very tortuous* branches At this point there was a curious twist, shown in the drawing, in its course it gave off a large number of fine branches The vena temp infer was not only over-distended, but showed a marked difference in its caliber at various points Soon after leaving the papilla it widened out but became narrower again, before dividing into its two branches The branch running toward the temporal side ended in very tortuous twigs The vena nasal infer was not greatly congested as were the two former At one point it presented a constriction so great as almost to divide the blood vessel, (D) A small bluish spot (A) was seen lying upon the vessel and resembled a little cloud The congestion of the retina was likewise shown by the appearance of numerous fine vessels throughout the retina, one set lay below the macula and was apparently not connected with any of the other retinal blood vessels, (C) The vessels of the superior nasal quadrant were normal and there were *no* hemorrhages in this region V R E 8-8 V L E 6-6 There was a small scotoma between 5 and 10 degrees beneath the point of fixation



Field 1

January 6, I was surprised to find that the large hemorrhagic plaque had migrated to a lower point and was lying directly over the macular reflex, its lower edge was slightly concave and corresponded with the convexity of the upper margin of this reflex (See Fig 2) The hemorrhage was bounded above by an almost perfectly straight and horizontal line, at the nasal end this ran out into a set of linear hemorrhages which united the large effusion with the hemorrhages in the upper part of the retina The area occupied by the effusion two days before was now apparently normal There were dust-like opacities in the vitreous

January 10, the hemorrhagic effusion had sunk still lower and had become divided into two *parts, united by an irregular line* A small portion (see Fig 3 E) occupied the former position in the form of a narrow band, whose lower edge fitted closely to the reflex of the macula in its upper and outer portion The greater part of the effusion occupied a position to the temporal side of the macula and beneath it (See Fig 3, F) It was not regular in form but its upper margin was mainly formed by a straight horizontal line A fresh vitreous hemorrhage had occurred from the upper and temporal portion of the retina (Fig 3 G)

January 12 there was but a fine hemorrhagic line remaining as a margin of the upper border of the macular reflex The line of hemorrhages which united the two parts of the effusion and the hemorrhages in the upper part of the retina, had to a great extent disappeared, only a few points were left to indicate its position A number of white spots were seen among the hemorrhages in the upper part of the retina

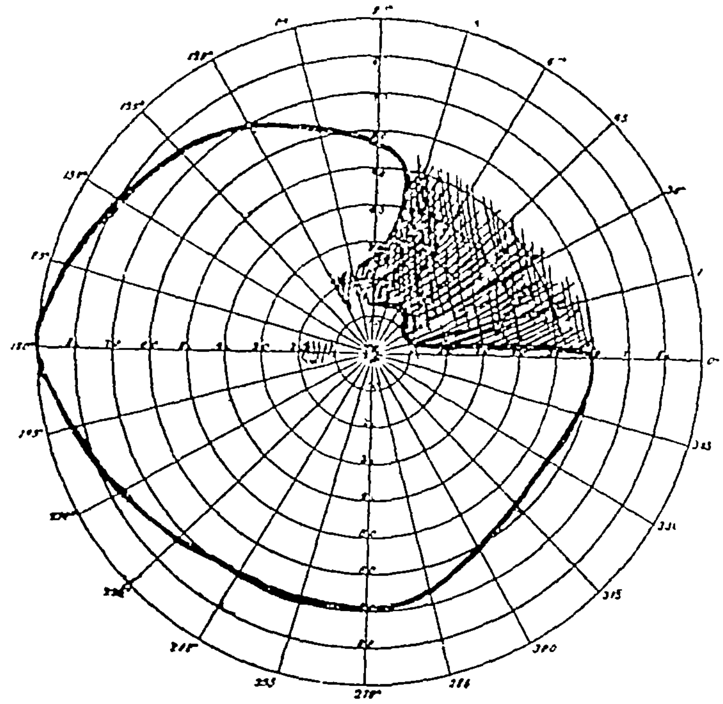
January 16, fresh hemorrhages had again occurred, a fine linear hemorrhage lay in the inner macular region, a large effusion reached partly into the vitreous below (See Fig 4) The vena nasal super presented a fusiform dilatation at some distance (3 to 4 P D) from its origin Central vision was almost perfect, but sight was somewhat disturbed during the past few days by a dark brown crescent-shaped cloud moving before the eyes

January 22, the hemorrhages below the macula had so far diminished in size as to become lines resembling fine blood vessels

January 30, at the point where the vena temp super ended in two fine branches, a veilly formation made its appearance, it was formed of a delicate network of blood vessels, lying in the vitreous (See inserted in Fig 4)

February 11, there was a fresh hemorrhage in the lower inner periphery of the retina, the old hemorrhage below the macula had entirely disappeared, V R E still 8-8

March 5, the vena nasal infer showed peculiar changes About 2 P.D from its origin, it sent off a large number of fine capillary vessels, which formed a meshwork in the vitreous (Inserted in Fig 4, at A) At this point there was the appearance of a bend or twist in the vessel A short distance beyond there were two thickenings, which upon close examination were seen to be twists in the vessel (Fig 4, H H) Beyond these points the vessel became exceedingly attenuated for about 1 to 2 P D, then widened out and divided into fine twigs On one of these there was a distinct round elevation (Fig 4, J) This upon careful observation, was found to be a varicose dilatation, upon pressing on the eyeball, the dilatation visibly *diminished in size* One of the fine branches arising from the vena temp super had become very tortuous and ended in a bunch of blood vessels reaching into the vitreous The vena nasal super was now very tortuous, had marked variations in its caliber, (dilatations and constrictions), and was covered in the periphery by a hazy gray cloud



Field 2

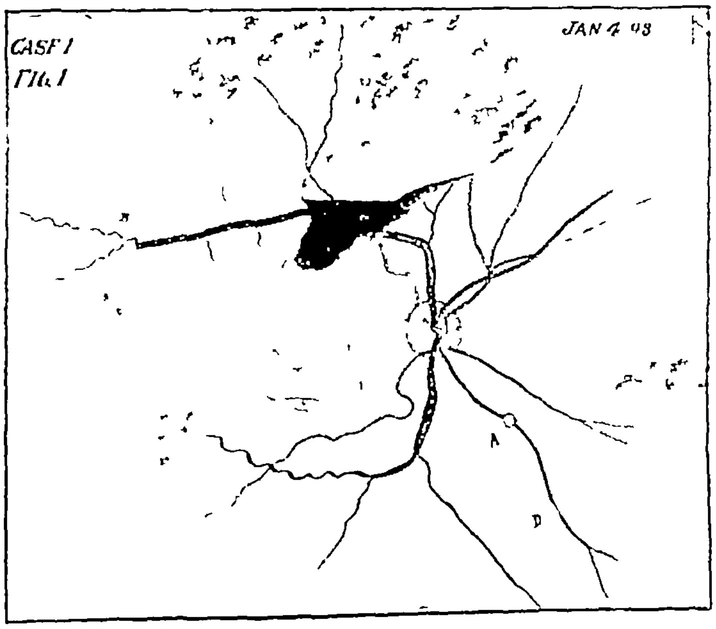
March 28, the vascular veil arising from the vena nasal infer had greatly increased in size and now reached the lower inner margin of the papilla, (best seen with 2 Ds) The vascular formation on the vena temp super had likewise greatly increased in size and now contained some whitish connective tissue V unchanged Since the last visit the patient had had a recurrence of the intermittent chills, on March 17 and 19 they were severe, he then began taking quinin and was relieved

April 7, V R E, 8-6 almost The hemorrhagic spots in the upper part of the retina had almost entirely disappeared, there were no fresh hemorrhages The vitreous still contained fine dust-like opacities

April 21, sight was unchanged until this morning On the preceding day he had been *sparring for some time* While reading the paper in the morning, he noticed the appearance of arrows, (black and green), flying before the eye and then a veil Sight rapidly became worse, so that when examined a few hours afterward he could count fingers at but three feet With the ophthalmoscope it was evident that a large vitreous hemorrhage had occurred

During the next few days the veil seemed to rise somewhat and V L E became 8-50 (almost), by April 23 At this time the hemorrhages were visible on the nasal side of the retina and in the vitreous toward the temporal side and below One of these seemed to have started from the upper, outer part of the retina The vascular formations in the vitreous gradually increased in size On May 18, the one on the vena nasal infer had entirely crossed the papilla and extended beyond its upper outer margin V R E 8-18 partly

Feb 14, 1894, the patient returned after a long absence He informed me that his vision had improved so much that he had been able to see as well with the right eye as with the left But in September, 1893, he had had a recurrence of his malarial chills and his vision had become slightly worse In December, 1893, he had again had a hemorrhage, which likewise slowly cleared up A few weeks ago another hemorrhage had occurred and this had almost completely destroyed the vision of the right eye He could but see movements of the hand in the outer part of the field



At this time, (Feb 26, 1894), he was thoroughly examined by my brother, Dr Julius Friedenwald, who found all the organs healthy, (lungs, heart, kidneys, etc , the urine had been examined a number of times before, with negative result) The examination of the blood showed that "there was a low percentage of hemoglobin, but that the number and variety of the red and white corpuscles were normal The condition was therefore similar to that of chlorosis in the female "

There was a black reflex to the ophthalmoscope in all directions excepting in the innermost part where there was a narrow line of red V gradually improved and the red reflex became larger

May 1, V 6-60

June 22, V 8-36 Slight red reflex in the center of the pupil

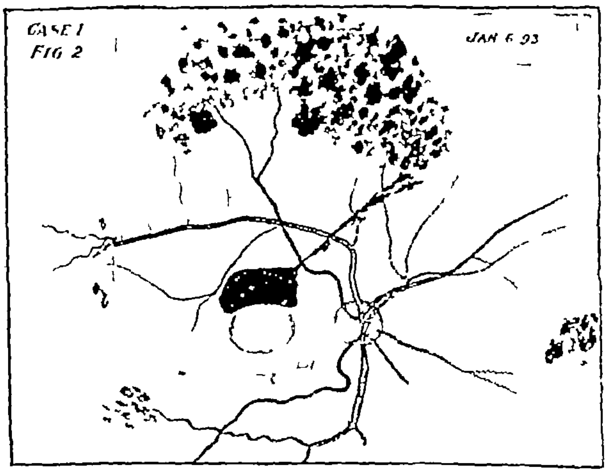
July 21, V 8-12 (partly) The center of the dilated pupil is clear, but the periphery of the vitreous is in great part dark Toward the end of 1894, V again became worse but subsequently cleared though very slowly

At the last examination, (April 18, 1895), V with dilated pupil (atropia), 8-24, with —1 Ds 8-18 and 8-12 partly' The eye now admits of ophthalmoscopic examination, the papilla is fairly clear, there are large masses of vascularized connective tissue in the vitreous, much larger than when last seen, presenting the picture of retinitis proliferans'

Concerning the treatment, of which no mention was made in the above history, we may state here that it consisted at first in the administration of ergot, later of iodid of potassium, of jaborandi and of quinin None of these remedies produced any decided or even appreciable effect on the course of the affection

In following this case, it is evident that the hemorrhages were due to disease of the retinal veins[3] The first appearance of the hemorrages, which were densest in the upper periphery of the retina was associated with a definite sector-like defect in the field of vision, which has never disappeared It is quite probable that this was due to a thrombosis of a small venous branch in the corresponding part of the retina The affection of the veins was demonstrated by the pathologic dilatations and constrictions and by the varicose formation

The fine vascular loops which developed in the vitreous, started from greatly congested veins and at points where there was a twist of the vessel (A and B) While under observation no vitreous hemorrhages occurred at these points, the development of the blood vessels was not the result of a process of absorption of effused blood It is difficult to account for their formation in this case, unless we assume that they resulted from the great engorgement of diseased veins It is scarcely possible that they were an evidence of organization of vitreous opacities, for the opacities which existed at that time were exceedingly fine and slight As in a case which I have recently seen, and which I shall report at some later time, we may regard them as an evidence of vascular disease


CASE I FIG 2

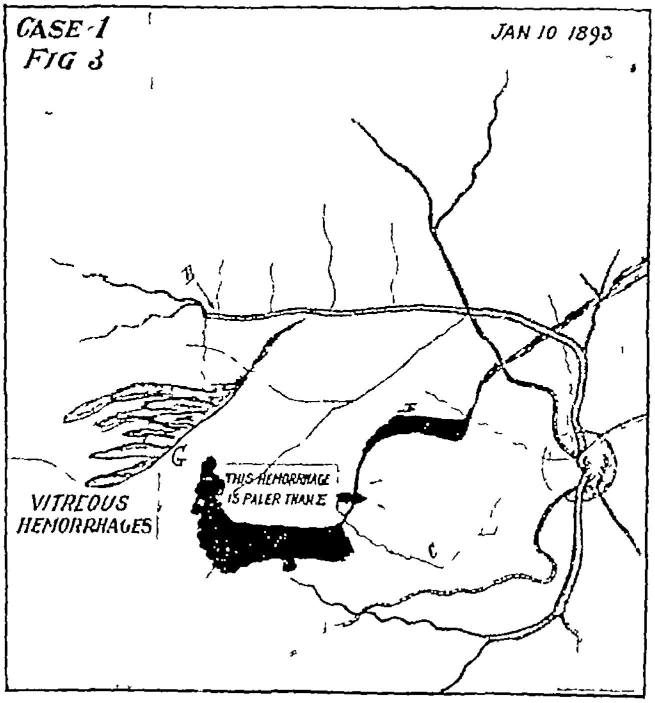
JAN 6 93

The fine, transparent vascular formations gradually and slowly developed into large connective growths, known as retinitis proliferans This affection or rather condition is usually attributed to the organization of hemorrhages in the vitreous (See *Leber Graefe Saemisch's Handbuch*, vol v, p 666) Our case definitely showed that the vascular formation may be the beginning of retinitis proliferans Connective tissue growths have been observed in other cases of juvenile vitreous hemorrhages[4] In these cases the connective tissue was considered an organized blood clot

Concerning the appearance of newly formed blood vessels in the vitreous, we may mention that but a small number of cases have been published and in these the vessels remained stationary or disappeared in the course of time Their development into the connective tissue masses described above, has not been observed[5]

A feature of great interest in our case lay in the subhyaloid hemorrhage Its position between the retina and the vitreous admits of no doubt These cases have recently been collected and studied by Haab,[6] Dimmer,[7] and Hotz[8] The total number of these cases is not large In one respect our case differs from all the rest, namely, in the distinct appearance of a firm union between retina and vitreous around the macula That there is such a firm union in these parts has been assumed by Gunn, Nettleship, Lang and others to account for the circular form which subhyloid hemorrhages within the macula usually take on But this assumption was weakened by the fact that subhyaloid hemorrhages in other parts likewise frequently have a similar form In our case this union was proved by the form which the blood assumed in following the course of least resistance around the macula

Our case undoubtedly belongs to that curious class of juvenile hemorrhages of which numerous cases have been published No definite cause has been discovered for this affection, but a number of etiologic factors such as anemia, constipation, dyspepsia, cardiac hypertrophy etc, have been assumed None of these, except slight anemia, were present in our case


CASE 1 FIG 3

JAN 10 1893

Malaria may have played an etiologic rôle The patient had had malarial fever previous to the onset of the ocular affection and during its course, once a hemorrhage occurred at the same time as the chills In view of the fact that there was no other etiologic factor and that a number of cases of retinal hemorrhage unquestionably due to intermittent fever, have been published, it is proper not to disregard this fact In most of these cases,[9] however, the patients suffered with a severe form of the disease and frequently with marked cachexia

The trauma referred to in the history occurred so long before and was so slight that no etiologic importance should be attached to it

Case 2—R K aged 22, male, consulted me Nov 23, 1890 He had had good eyes and no constitutional disorders excepting measles in 1880, and typhoid fever in 1887 He had never suffered any injury There was slight but chronic constipation Urine was normal He related the following history, which was subsequently confirmed on Oct 14, 1889, while at dinner a veil suddenly appeared before the left eye, and in a little while there was scarcely light perception left He was examined by a well-known oculist who found a vitreous hemorrhage Sight improved, and in about three weeks he was able to distinguish persons and in six, he could read In three or four months he considered the sight restored to its full extent (?)

Oct 14, 1889, V L E, 8 18, V R E, 8-8 In the left field of vision there was a large defect occupying the upper nasal quadrant, evidently due to disturbance of the circulation in the inferior temporal vessels (See Field 2) Ophthalmoscopic examination the right eye showed nothing abnormal in the retina and a fine floating opacity in the vitreous The image of the left eye was very clear, the papilla was hyperemic, as was also the retina (unusually large number of fine blood vessels seen everywhere) A slender pillar of intensely white connective tissue was seen projecting from near the center of the papilla somewhat nasally, downward and forward into the vitreous Through its whole length a few fine blood vessels could be traced At the papillary origin a great number of very fine blood vessels were seen, forming slender loops in the vitreous At the distal end (best seen with + 6 D s), another set of vessels extended far into the vitreous, and at the end of one of these there was a gray vitreous opacity of such a shape as to suggest its being a degenerated blood vessel These vascular loops appeared to be entirely free from any connective tissue The long connective tissue mass with its vascular outgrowths swayed gently to and fro when the eyeball was moved

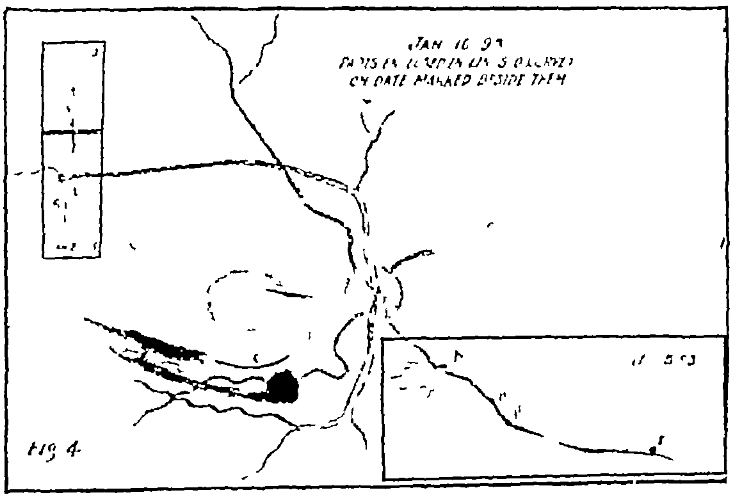


Fig 4.

On examining the retinal blood vessels the following observations were made on the superior temporal vein, about 2 P D from the margin of the papilla there was a red spot, lying directly over the vessel, it was somewhat irregular in form and had a diameter of between two and three times that of the vessel upon which it lay It had something of the appearance of a small hemorrhage with a faint whitish film over its central part On close examination it proved itself to be a varix, upon pressing upon the eyeball its size would diminish until it almost disappeared, leaving only a small gray spot not extending beyond the margins of the vein That there was no optical illusion was proved by the distinctness with which a fine blood vessel which ran into it was seen after the spot had almost entirely disappeared The vein itself showed no abnormality except a slight constriction just beyond the varix, this was apparently due to a gray thickening of the walls

The inferior temporal vein presented a number of interesting points About 1 P D from its origin it divided into two fine vessels which soon united in a large red spot, this had a diameter of between two and three times the caliber of an artery of the first order Beyond this, the vessel extended for a long distance but was exceedingly tortuous Near its origin the vessel sent off a fine macular branch, which in the macular region ended in a small rounded red spot Far in the temporal periphery, a similar spot hung like an apple from one of the veins, a fine white thread, an obliterated branching vessel, extended from it to a spot of choroidal atrophy

These red spots were all small varices, their size decreased decidedly on pressure on the eyeball

In the macular region there were a number of gray streaks and spots (irregular reflexes?), and one little crystal

At an examination about ten months later, no changes were noted in the picture described above

This case is in many respects analogous to Case 1 The vitreous hemorrhage which had thoroughly cleared up when I first examined the patient, must be ascribed to the diseased veins, as was seen in the varices and in the sclerosed vessel in the periphery of the retina No cause can be assigned for these changes

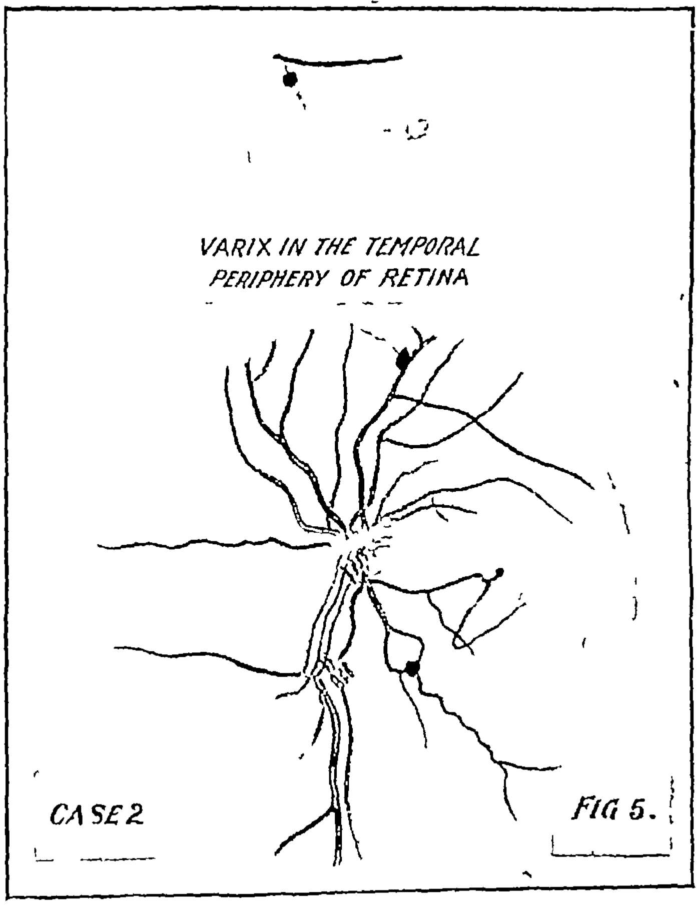


FIG 5.

In this case, the connective tissue in the vitreous was probably of different origin than that in Case 1 It had all the appearance of being a cicatricial band resulting from the absorption of the hemorrhage The development of the fine vessels in the vitreous, as outgrowths from the connective tissue band, may have been due to the same cause or they may have originated independently, as in Case 1

As both of these cases presented such marked evidences of vascular disease, I am inclined to the view that hemorrhages of the retina and vitreous in young persons may often be due to similar conditions Further observation will prove or disprove this view It is but proper to mention that a careful search has not resulted in finding any description in literature quite comparable to that observed in our cases [10]

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[1] Nieden observed a case of vitreous hemorrhage in which emmetropia developed into myopia (6 Ds) Bericht der ophthalm Gesellschaft Heidelberg 1883

[2] Since the paper was read the patient has been examined a number of times His vision continues to improve August 26 1895 V R E 8-24—1 75 D s 8-S almost At this time there was a clear red reflex in every direction with but few grayish and translucent vitreous opacities, the image *of the papilla was fairly clear* The vessels were normal, or slightly congested as far as they could be followed some disappeared in the white connective tissue formations The latter contained blood vessels which extended *far forward into the vitreous This improvement* gave us great encouragement but unfortunately on Oct 11 he returned with a fresh vitreous hemorrhage, which had again reduced vision to the perception of light

[3] The source of the vitreous hemorrhages under consideration has sometimes been placed in the retina, more frequently in the choroid

[4] Jacobson, Mittheilungen a d Koenigsberger Klinik, 1880, reviewed in Nagel s Jahresbericht for 1880, p 350 Proebsting Arch f Ophthalm XXXVIII 3, p 114 Raab Arch f Ophthalm XXIV, 90 Chodine, reviewed in Annales d Oculistique, Amer Ed 1895 p 287

[5] See Hirschberg Centralbl 1890 p 266, where a number of cases are collected Schutter Centralbl 1881 p 40 Charnley and Fox Ophthalm Hospital Reports X 2 p 193, reviewed in Nagel's Jahrb f 1881, p 424 Jacobi Zehender s Monatsbl 1874, p 255 reviewed in Nagel s Jahrb 1874, 387

[6] Deutschmann's Beitraege, Bd I p 395

Deutschmann s Beitraege, Bd II p 389

[8] Annals of Ophthal and Otology, Jan 1893

[9] These cases have never been collected A brief resume is therefore not out of place

V Kries (Graefe s Archiv, XXIV reviewed in Nagel s Jahrb f 1878, p 231) observed two cases as sequelæ of intermittent fever, in one there was a profuse vitreous hemorrhage in one eye in the other case there were profuse retinal hemorrhages in both eyes

Pennow Centralbl 1878 p 88) (reviewed in Nagel s Jahresb f 1878, p 230) found retinal and conjunctival hemorrhages in a number of patients suffering with intermittent fever

Karpinsky observed retinal hemorrhages in a patient who had had intermittent fever for two or three weeks (See Nagel s Jahresb f 1879, p 226)

Pennow observed retinal hemorrhages in a case of malarial cachexia, (Nagel s Jahrb 1883 p 801)

Landsberg (see Nagel s Jahresb 1894 p 826) reported two cases of retinal hemorrhages due to intermittent fever and occurring during or just after an attack

Jones saw twelve cases of intra-ocular hemorrhages in malaria (N Y Med Record June 27 1885 p 705)

Bull reported seventeen cases of intra-ocular hemorrhage which he ascribed to malaria All of these patients were over 50 years of age Equatorial choroiditis was seen after the blood was absorbed (N Y Med Record Dec 1886)

Mackenzie saw four cases of retinal hemorrhages due to very severe forms of intermittent fever (Lancet 1887 vol II p 497)

Brunt reported six undoubted cases In all of them there was a high degree of malarial cachexia (N Y Medical Record 1888, p 36)

Minor mentions the occurrence of retinal and vitreous hemorrhages as a result of malaria (Amer Journal of Ophthalm 1891 p 243)

[10] Jacobi described varicose tortuosity of some retinal veins in three cases in one associated with the *development of blood vessels in* the vitreous But this appears to have been quite a different condition from that described in my cases (Klin Monatsbl., 1874, p 255 reviewed in Nagel s Jahrb f 1874, p 387)

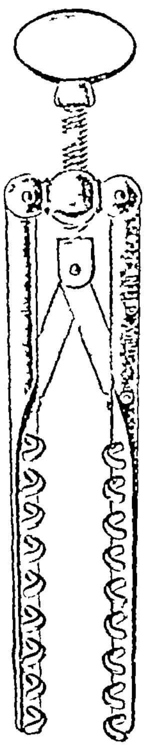
NEW INSTRUMENTS

A MODIFICATION OF MY MASTOID RETRACTOR

BY FRANK ALLPORT, M D

PROFESSOR OF CLINICAL OPHTHALMOLOGY AND OTOLOGY IN THE MINNESOTA STATE UNIVERSITY PRESIDENT MINNESOTA STATE MEDICAL SOCIETY, ETC
MINNEAPOLIS MINN

Some years ago I devised an instrument for facilitating mastoid operations It has passed into extensive use, but its utility has been much curtailed by the fact that many instrument manufacturers persistently perpetuate two faults in its construction They make it *too delicate for permanent* strength, and what is still more annoying, make a round or square screw-handle The screw-handle should be flat, for when it is either round or square, the fingers will surely slip in screwing it up after the teeth have become engaged in the wound This defeats one of the prime objects of *the instrument*, which is intended to be tightly screwed up, thus expanding the blades as widely as possible, for the double purpose of affording ample ground for operation, and of controlling the hemorrhage of the soft parts by producing extreme tension These objects can only be obtained with a strong instrument, and a good-sized flat handle I earnestly desire all instrument makers to notice these instructions in order to enable the instrument to accomplish its full amount of good



At this point I also desire to correct an unintentional error occurring in the last catalogue of Chas Truax, Greene & Co, of Chicago, who present a cut of my retractor among their mastoid instruments, under the name of Barth's Retractor Dr Barth, of Marburg, Germany, has, it is true, devised a mastoid retractor, but it differs entirely from the one devised by myself My mastoid retractor was made when nearly everybody used the drill for mastoid operations, and only a small field of operation was desired At present the drift of sentiment favors the chisel for such work, and for this purpose a larger and stronger instrument is desirable I have, accordingly, enlarged and strengthened my retractor, as will be seen by the accompanying cut My old instrument has incurved arms, thus enabling the teeth to lock and be inserted in a small opening The new retractor is intended for larger work, and an incurvation of its arms would lessen its strength, consequently I have had them made straight After the incision has been made, the lips of the wound can be shoved back, and the teeth, which are somewhat separated at the middle of the instrument, easily inserted and the blades expanded It is scarcely necessary to say, that this expansion should be as wide as possible, for the purpose of affording a large field for observation and controlling the hemorrhage of the soft parts

This retractor has also been devised for the purpose of facilitating openings into the cranial cavity at other portions of the skull, for abscesses, tumors, etc

I would remark incidentally, that the principle involved in this instrument can be made useful in operations upon any part of the body where it is desired to hold apart the lips of an incision Different sizes and shapes would, of course, become a necessity, but the principle involved is correct, and would much facilitate many operations

This instrument has been admirably constructed under my personal supervision, by Chas Truax, Greene & Co, 75 Wabash Avenue, Chicago, Ill, where it can be obtained, and I would respectfully request all other instrument makers desiring to manufacture the retractor, to strictly adhere to the model I have endeavored to describe

SOCIETY PROCEEDINGS

Chicago Pathological Society

Regular Meeting, Sept 9, 1895

WELLER VAN HOOK M D, President, in the chair

DR E FRIEND read a paper entitled

SYMMETRICAL GANGRENE OR RAYNAUD'S DISEASE

It is not with the idea of elucidating the etiology and pathology of this rare and *interesting* affection of the skin that I report the following case, which I had the good fortune of seeing, but merely to show the keen observing powers of that most excellent clinician whose name this disease bears and also to freshen the memory of those whose labors in other fields preclude the review of the literature of this subject

Page 29 of Raynaud's original thesis, translated by Thos

Barlow, M D , states "If, as I have attempted to prove, the fundamental fact of gangrene consists in the diminution or absence of oxygen necessary to the integrity of the life of a tissue, the pathogenic conditions of gangrene considered from a philosophic point of view will bring us back to the following cases

"1 Absence of blood dependent on all causes which may attack the normal functions of the arteries (obliteration of them in only a particular case) This condition can be compared to nothing better than syncope, in which the action of the heart is momentarily suspended I propose to call it 'local syncope'

'2 Presence of venous blood, that is to say, of a blood insufficiently oxygenated Continuing to use a term of comparison in the same order of ideas, I will designate this condition, local asphyxia

3 "It is possible that in consequence of an intoxication inexplicable as to its nature, the living cell, although having at its disposal the elements destined for its nutrition, may be struck with powerlessness to profit by them and gangrene results"

In classifying his cases, he divides them into six groups

1 Local syncope of the most simple form
2 Local asphyxia and superficial gangrene with predominance of the nervous element
3 Symmetrical gangrene of the extremities of benign form
4 Symmetrical gangrene of the extremities of grave form
5 Cases of symmetrical gangrene with lesions of the circulatory apparatus, established by autopsy
6 Doubtful cases, those cases which present less and less certainty, nevertheless they are interesting as a group, because they are in a marked degree removed from what occurs in the common cases, and because they may perhaps one day contribute to clear up many obscure points It is not impossible that we may have here a very advanced form of the malady which occupies our attention

Under the latter, he cites a very interesting case reported by Bernard Schrader as follows "In 1829 while traveling with my brother, Jean Schrader, and Alexander Lak, studying surgery, we found ourselves in a town called Giest and having entered a hostelry, the master, who was called Jean Brandes, made us see his daughter, aged 23 years who was attacked with the following malady each month she suffered from severe pains in the extremities of the fingers, and of the toes, accompanied by edematous swelling of the face, feet and hands This was followed by sphacelus or mortification of the extremities of those parts in which the pain was first felt, which became pale, dry, insensitive, nevertheless with no bad smell, and with no humor proceeding from them

"These gangrenous parts separated each month in small morsels, which preserved their normal form While informing me more particularly of the circumstances of this illness, the father of the girl showed me a box in which there were more than a hundred of these morsels of dead flesh which, in the space of three years, had been thrown off and detached from the extremities of different parts of the body of this girl"

As the name implies, the gangrene affects usually symmetrical parts of the body, more frequently the toes of both feet or the fingers of both hands and the two halves of the nose Still there have been cases reported of late, which are undoubtedly of the same etiologic relation, involving asymmetrical parts In the Nov 16, 1893, number of the *Wiener Klinische Wochenschrift*, Docent Riehl reports a case of symmetrical gangrene in a hysterical patient, which could be classified under Raynaud's second division of cases

A similar case is reported in the *Wiener Klinische Wochenschrift* of May 3, 1894, by Ehrl Characterizing both these cases, were well-marked hysterical symptoms, such as localized anesthesia, diminution of the field of vision, achromatopsia, and ovarian tenderness

I am indebted to Dr Anson Brackett, of Nashua, Iowa, for the following history, having seen the patient in consultation with him in the summer of 1891

Miss A E C , American, age 37, occupation that of a seamstress Hair brown, eyes gray, height five feet eight inches, weight about 140 pounds Complexion a little sallow Lips pale, conjunctiva pale, blood vessels of the face ectatic, in spots, giving the skin a blotchy appearance, digestion good, bowels regular, appetite capricious Patient had a severe attack of gastritis when she was 20 years of age, and has never menstruated since Vaginal examination not permitted, but no tenderness or abnormal condition appreciable by external examination Urine normal, sp gr 1020, acid in reaction Lungs and heart normal, as well as the abdominal viscera The patient has never been robust since her sickness seventeen years ago, her health has been fair, has had to work very hard indoors in poorly ventilated quarters and was defrauded of her small savings a few years ago, which still further depressed her, and necessitated a renewal of incessant labor She often sewed late into the night In May, 1890, she began to feel badly No definite symptoms were manifest, but she complained of general malaise over a period of some weeks This was followed by feeling cold, yet with no distinct chills The next manifestation was severe and protracted pain, localized in different spots on both lower extremities The pain was accompanied by a burning sensation in these spots, followed by intense redness, which gradually assumed a purplish hue ultimately turning black, and surrounding each was a well marked line of demarkation These spots, varying in size from that of a split pea to three inches in diameter limited to both thighs, below the middle third, and exquisitely sensitive to touch After the line of demarkation had formed, separation took place very slowly, leaving a dirty gray base, which healed gradually, it being weeks before cicatrization took place There was no elevation of temperature except locally The pulse was rapid, lacking in tonus, becoming quite thready at times The general condition was that of great exhaustion and loss of vitality

The treatment was purely symptomatic, as a tonic, strychnia and iron was given in full doses, rest, nutrition, general attention to hygiene of surroundings Locally, flaxseed meal poultices and iodoform After a few months she was able to get out of doors some, but walked with difficulty and was easily prostrated During the summer of 1893 she had a recurrence of the condition, not so severe, however, the gangrenous spots seeming more superficial, in some of them a partial line of what might be called demarkation formed, followed by bullæ of considerable size which were filled with a serous fluid and which soon dried up These did not in the least resemble those of pemphigus She had exacerbations and remissions of these lesions from time to time since, spending most of her time in bed in a weak and debilitated condition until about six weeks ago, when death relieved her

Post-mortem examination not allowed No tests were made for hematuria or hemoglobinuria, nor were the gangrenous masses examined for chemic agents The urine contained no sugar, nor could any history of ergot or other medicinal poisoning be obtained, of local processes The following could be entirely excluded, such as anthrax, furunculosis, phlegmon, as also gangrene from embolus of the vessels supplying the parts, as well as herpes zoster gangrenosum

Affleck reports two cases of Raynaud's disease, the second of which was such a typical one that it will be well to briefly describe it

A kitchen maid aged 16, entered the hospital, stating that during six months preceding she had been subjected to severe pains in her hands and feet, very severe for eight days before entrance The pains soon subsided in her feet, but became worse in her right hand, the tips of the fingers of which were blanched and corpse-like There was great pain and at the same time anesthesia of the hand The left hand presented the same appearance only in a milder form The toes again became painful, but appeared perfectly normal Physical examination of the patient revealed no pathologic or abnormal condition except that no brachial, radial, nor ulnar pulse could be felt in the right arm The right subclavian and axillary arteries were smaller than the left, and the circumference of the right arm and hand was about one-half an inch smaller than that of the left

The arm was treated by means of warm opium fermentations, after which, whenever these removed, the hand first appeared blanched but very soon became purple and so painful that the fermentations had to be reapplied Three days after entrance to the hospital there appeared in the tip of the middle and ring fingers, a dark spot which eventually sloughed off The patient improved and left the hospital, but no pulsation could at any time be felt in the right arm

In the other case, there was no clear history of the stage of ischemia of the skin, both feet being attacked instead of one hand, and the gangrene was much more extensive, following a Symmes amputation of the left foot, an examination of the nerves revealed a neuritis, and to this might be added numerous other cases, especially those of Pitres and Vaillard, in which the same pathologic changes in the nerves had taken place

The following are the most common themes regarding the etiology and pathology of the disease

1 Endarteritis obliterans
2 Peripheral neuritis
3 That championed by Raynaud, namely, a vascular spasm

Cases included under these various theories have been cited from time to time, some claiming that the peripheral neuritis is only secondary to the vascular disturbances, and others that the neuritis is primary and responsible for the gangrene This latter view is held by Pitres and Vaillard

In support of his theory of spasm of the smaller arteries, as the causative factor in local asphyxia of the extremities, Raynaud reported a case of remarkable coincidence between the peripheral circulatory disturbances and identical phenomena observed with the ophthalmoscope in the retinal circulation which phenomena became manifest clinically by an intermittent obscuration of vision Regarding the treatment, Barlow states that in a great many cases of symmetrical gangrene, amputation is necessary, as in other forms of gangrene, but in those cases where the gangrene is superficial he strongly advises the use of the constant current The extremity of the limb which is the subject of gangrene is immersed in a large basin, containing salt and water, one pole of the battery is placed on the upper portion of the limb, and the other in the basin, thus converting the salt water into an electrode, opening and closing the current repeatedly to get moderate contractions In connection with this method, gentle massage ought also to be tried after the acute pain has subsided

EXHIBITION OF SPECIMENS OF PYOSALPINX,

by *Dr. Weller Van Hook* *I have brought with me this* evening a specimen from a case upon which I operated last Friday It consists of tubes and ovaries which were removed for salpingitis or as Martin calls this condition sactosalpinx purulenta If there is any interesting point about the specimen it is this, that we have here an acute inflammation engrafted upon a chronic inflammation, the tubes and ovaries having been removed during the acute attack The patient was a married woman 28 years of age, with one child 6 years of age Her husband confessed to having had *gonorrhea some twelve years ago, but assured me that the* disease was entirely cured, and the patient does not give a history that she had an acute attack of gonorrhea at any time It was only after the child was born that she had a pelvic inflammation She has since had repeated attacks of salpingitis after which she partially recovered, but had the usual pain and suffering that such women endure She menstruated eight or ten days ago, but on the third day of menstruation the menses suddenly stopped, and she began to have intense pain in the abdomen, with elevation of temperature and other signs of acute salpingitis Two or three days later the tubes were removed Upon examining them it will be seen that they are intensely congested, but that the main portion of their surface is of a yellowish tint In strictly acute salpingitis, either puerperal or gonorrheal the color of the tubes is a vivid red

There are the usual evidences of the tubes having been removed forcibly and the adhesions torn off The fluid in the larger tube is of a straw color, somewhat inclined to be viscid, and is loaded with staphylococci

Martin's new book on the diseases of the tubes, which has just appeared, is a most interesting work and, I am sure, will be read with eagerness by every one interested in this work He presents beautiful chromo-lithographs of such conditions as are shown by these tubes

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American Public Health Association

Proceedings of the Twenty-Third Annual Meeting held in Denver Colo, Oct 1–4, 1895

FOURTH DAY—FRIDAY OCTOBER 4

(*Concluded from p 676*)

The concluding session of the meeting of the Association was called to order shortly after 9 o'clock by PRESIDENT BAILEY

After various announcements on behalf of the Local Committee of Arrangements had been made by CHAIRMAN SEWALL, the Executive Committee submitted the following recommendations that the Standing Special Committee "On Restriction and Prevention of Tuberculosis," be discontinued Adopted

Three applications for membership were then elected members of the Association in the usual manner This was followed by the report of the Advisory Council which was read by Secretary Grey, and consisted in naming the officers and three members of the Executive Committee for the ensuing year, all of whom were unanimously elected as follows

President, Dr Eduardo Liceaga, of the City of Mexico, Mexico

First Vice-President, Col A A Woodhull, U S A, Denver, Colo

Second Vice-President, Henry Sewall, Denver, Colo

Secretary, Irving A Watson, Concord, N H

Treasurer, Henry D Holton, Brattleboro, Vt

Buffalo, N Y, was named as the place for the next annual meeting

The new members of the Executive Committee are

J C Shrader, Iowa City, Iowa
R S Goodwin, Thomaston, Conn
James F McShane, Baltimore, Md

Regarding the time the next annual meeting should be held, as suggested in the President's address, it was moved and duly seconded that the option be placed in the hands of the incoming President, Vice-Presidents and Secretary, and if they thought it best that the meeting be held in September, 1896, *to arrange for it to be held* during that month instead of October

PRESIDENT BAILEY announced these committees, a number of names being substituted during the reading as occasion required

ADVISORY COUNCIL

Alabama—Jerome Cochran, Mobile
Arkansas—H C Dunnavant, Osceola
Connecticut—R S Goodwin, Thomaston
California—J R Laine, San Francisco
Colorado—W P Munn Denver
Delaware—Mr W C R Colquhoun, Wilmington
Florida—Joseph Y Porter Key West
Georgia—William F Brunner, Savannah
Illinois—Liston H Montgomery, Chicago
Indiana—Lindsay S Whitesides, Franklin
Iowa—A. W Cantwell, Davenport
Kansas—Dr Gifford, Topeka
Kentucky—J N McCormack Bowling Green
Louisiana—Felix Formento, New Orleans
Maine—A G Young, Augusta
Maryland—James F McShane, Baltimore
Massachusetts—Samuel H Durgin, Boston
Michigan—Cressy L Wilbur, Lansing
Minnesota—H M Bracken, Minneapolis
Mississippi—Wirt Johnson, Jackson
Missouri—J D Griffith, Kansas City
Nebraska—F D Haldeman, Ord
New Hampshire—Granville P Conn, Concord
New Jersey—Henry Mitchell, Asbury Park
New Mexico—J Cole, Cerrillos
New York—A Walter Suiter, Herkimer
North Carolina—F E Lewis, Raleigh
North Dakota—John Montgomery, Ardoch
Ohio—Charles O Probst, Columbus
Oklahoma—Charles F Waldron, Oklahoma City
Pennsylvania—Mr Crosby Grey, Pittsburg
Rhode Island—Gardner T Swartz Providence
South Carolina—H B Horlbeck, Charleston
South Carolina—K M O Teigen, Fargo
Tennessee—J Berrien Lindsley, Nashville
Texas—R M Swearingen, Austin
Vermont—Henry D Holton, Brattleboro
Virginia—(Unable to make the appointment as Professor Minor is dead)
Washington—G S Armstrong, Olympia
West Virginia—Louis D Wilson, Wheeling
Wisconsin—U O B Wingate Milwaukee
District of Columbia—Ralph Walsh, Washington
United States Army—F Terrell, Washington
United States Navy—Newton L Bates, Washington
U S M-H S—P H Bailhache, Staten Island, N Y
Dominion of Canada—Frederick Montizambert, Quebec
Province of Ontario—Peter H Bryce, Ontario
Province of Quebec—E P Lachapelle, Montreal
Manitoba—James Patterson Winnipeg
New Brunswick—George E Coulthard, Fredericton
Nova Scotia—A P Reid Halifax

The appointment of members of the Council for the States of Mexico was referred to the new President, Dr Liceaga

PUBLICATION COMMITTEE

Irving A Watson, Concord N H
Granville P Conn, Concord, N H
Samuel W Abbott, Wakefield, Mass

COMMITTEE ON THE POLLUTION OF WATER SUPPLIES

Maj Charles Smart, U S A, Washington, D C, (with authority to select associates)

COMMITTEE ON THE DISPOSAL OF GARBAGE AND REFUSE

Rudolph Hering, C E, New York City
Delos Fall, Albion, Mich
Louis Laberge, Montreal, P Q
Henry F Hoyt, St Paul, Minn
Roberto Gayol, C E, Mexico, Mex

COMMITTEE ON ANIMAL DISEASES AND ANIMAL FOOD

D E Salmon, D V M, Washington, D C
Prof James Law, Ithaca, N Y
Prof José L Gomez, Mexico, Mex

COMMITTEE ON NOMENCLATURE OF DISEASES AND FORMS OF STATISTICS

Samuel W Abbott, Wakefield, Mass
Jesus E Monjaras, San Luis Potosi, Mex
Elzear Pelletier, Montreal, P Q
Cressy L Wilbur, Lansing, Mich
Charles N Hewitt, Minneapolis, Minn

COMMITTEE ON PROTECTIVE INOCULATIONS IN INFECTIOUS DISEASES

Prof Victor C Vaughan Ann Arbor, Mich
Surgeon-General George M Sternberg, U S A, Washington, D C
George H F Nuttall, Baltimore, Md
M Carmona y Valle, Mexico, Mex
J E Laberge, Montreal, P Q

COMMITTEE ON NATIONAL HEALTH LEGISLATION

Henry P Walcott, Cambridge, Mass
J N McCormack, Bowling Green, Ky
Irving A Watson, Concord, N H
James D Plunkett, Nashville, Tenn
Henry B Baker, Lansing, Mich
Samuel R Oliphant, New Orleans, La
Richard M Swearingin, Austin, Tex
Henry B Horlbeck, Charleston, S C
Benjamin Lee, Philadelphia, Pa
Samuel H Durgin, Boston, Mass
U O B Wingate, Milwaukee, Wis
Stephen Smith, New York, N Y
C O Probst, Columbus, Ohio

COMMITTEE ON THE CAUSE AND PREVENTION OF DIPHTHERIA

J J Kinyoun, Washington, D C
Peter H Bryce, Toronto, Ont
Juan Ramirez De Arellano, Mexico, Mex
Wyatt Johnson, Montreal, P Q
A Walter Suiter, Herkimer, N Y

COMMITTEE ON CAUSES AND PREVENTION OF INFANT MORTALITY

Charles N Hewitt, Minneapolis, Minn, (with authority to select associates)

COMMITTEE ON CAR SANITATION

Granville P Conn, Concord, N H
E C Jordan, C E, Portland, Me
Domingo Orvanos, Mexico, Mex
S H Woodbridge, Boston, Mass
E R Lewis, Kansas City, Mo

INTERNATIONAL COMMITTEE ON THE PREVENTION OF THE SPREAD OF YELLOW FEVER

Felix Formento, New Orleans, La
Surgeon-General George M Sternberg, U S A Washington, D C
Gregorio Mendizabal, Orizaba, Vera Cruz, Mex
Manuel Carmona y Valle, Mexico, Mex
Jerome Cochran, Mobile, Ala
Samuel R Oliphant, New Orleans, La
H B Horlbeck, Charleston, S C

ON STEAMSHIP AND STEAMBOAT SANITATION

F Montizambert, Quebec, Canada
Samuel H Durgin, Boston, Mass
Samuel R Oliphant, New Orleans, La
H B Horlbeck, Charleston, S C
Albert L Gihon, U S N, Washington, D C

The Committees "On the Transportation of the Dead" and "On Disposal of the Dead" were merged into one committee, namely

COMMITTEE ON TRANSPORTATION AND DISPOSAL OF THE DEAD

and consists of

Jefferson D Griffith, Kansas City, Mo
Peter H Bryce, Toronto, Ont
Charles D Smith, Portland, Me
Charles O Probst, Columbus, Ohio
Farquhar Ferguson, New York City
Mr George W Fuller, Lawrence, Mass
Elzear Pelletier, Montreal, P Q
Jesus Chico, Guanajuata, Mex

COMMITTEE ON THE USE OF ALCOHOLIC DRINKS FROM A SANITARY STANDPOINT

Felix Formento, New Orleans, La
C O Probst, Columbus, Ohio
E P Lachapelle, Montreal, P Q

The appointment of the chairman of the Local Committee of Arrangements was referred to the new administration

Mr Crosby Grey offered a motion duly seconded that when the Association adjourns, it do so at 11 45 o'clock The motion prevailed

The following resolution offered by Dr J N McCormack was unanimously adopted

Resolved, That the members of the American Public Health Association desire and hereby tender most cordial thanks to all concerned in inviting and bringing the twenty third annual meeting of the Association to the beautiful Queen City of the Plains, the Committee of Arrangements, the physicians and citizens, the Chamber of Commerce and especially to the ladies of Denver for the attentions and charming hospitalities which have made the stay here a pleasure, to the various railroad companies for reduced rates, to the Brown Palace Hotel for the use of its hall and to the newspapers for reports of proceedings We also express thanks to Dr Cantwell and other citizens of Davenport, Iowa, for courtesies extended at that point, and to the retiring President for the able, courteous and dignified manner in which he has presided over the meeting

Dr Henry Mitchell moved, duly seconded, that a committee of three be appointed by the chair to communicate with the Postmaster General regarding the transmission of bacteriologic specimens through the mails, in accordance with the resolution adopted on Wednesday forenoon by the Association The motion prevailed

At the instance of the Special Committee on National Legislation of the American Pharmaceutical Association, of which Dr F E Stewart of Detroit, Mich, is chairman, Dr Liston H Montgomery submitted letters and a resolution to the new executive committee, looking to the securing of uniform poison laws in all the States, as the laws at present regarding the sale of poison are not in accord For instance a poison can be legally sold as such in most States only with the label of warning, and after registration by a competent pharmacist Put it up in the form of a proprietary medicine, and it is at once beyond the restraint of regulation and then it may be sold by anybody without let or hindrance

REPORTS OF SPECIAL COMMITTEES

Dr Irving A Watson reported for Dr Charles Smart, chairman of the Committee on the Pollution of Water Supplies, that the committee is hard at work and that this be regarded as a report of progress, with the request that the committee be continued, which was so ordered

Dr P H Bryce reported briefly for himself as the chairman of his Committee on International Pollution of Water Supplies, which was on motion referred to the new executive committee

Mr Rudolph Hering, chairman of the committee on the Disposal of Garbage and Refuse, submitted an elaborate report, yet he stated that it was not complete The speaker read but a few moments, when upon motion, the report was accepted, referred to the Publication Committee, and the committee continued in accordance with previous appointment

Reports were due, although none were presented, from the following committees On National Health Legislation, On the Cause and Prevention of Diphtheria, On Causes and Prevention of Infant Mortality, On the Transportation of the Dead

Thirteen papers were announced to be read on the morning's program A few were read with little or no discussion on the propositions evolved The first paper was presented by Dr Eduardo Liceaga of the city of Mexico, entitled,

A CONTRIBUTION TO THE STUDY OF YELLOW FEVER IN CONNECTION WITH ITS MEDICAL GEOGRAPHY AND PROPHYLAXIS IN THE MEXICAN REPUBLIC

The speaker contended that the means of combating the disease must be sought in the inoculation of blood serum from persons already attacked, or rather who have suffered from yellow fever, or by inoculation of blood serum from animals that have acquired immunity Yellow fever does not exist in an endemic condition except in the port of Vera Cruz, and in the northern districts of the peninsula of Yucatan There is not nor has there been a single endemic source of this disease on the Pacific Coast of the Mexican Republic The only epidemic during the present year was that which occurred at Vera Cruz with a mortality of 120, between January and August

The second topic was a paper on

PROPHYLAXIS OF YELLOW FEVER,

by DR MANUEL CARMONA Y VALLE, also of the city of Mexico, which was read in English by Dr Formento, while his colleagues and the author attentively listened The writer said in part By the inoculation of a yellow fever sufferer with his urine the disease is stemmed and finally eradicated from the system In 1882 he began treating victims of the scourge with subcutaneous injections of urine and success followed He discovered that he could vaccinate a sound person with the fluid from a patient who was over four days diseased, and that those undergoing the operation were immuned from any further danger of contagion The injection is made in the cellular tissues of the back part of the arm and from 1,358 inoculations made by him, there has never followed any other consequence than the formation of a single abscess in the place of injection This method has been used by Dr Garcia del Formel in Panama with great success The essayist, while first experimenting, treated 208 persons in 1882–83 Only one out of this number, a relative employed in the custom house in his city became slightly ill, not sufficient for him to go to bed with the malady Continuing he said that Surgeon General Sternberg of the U S Army, who had been *in correspondence with him, proposed* that the residuum of urine be obtained by the evaporation of the liquid in a vacuum M Bouchard of Paris, had been for some time investigating the author's method of treatment, with successful results in the case of inoculated animals The Doctor recommended to his colleagues in the United States that they use the residuum retained in small flasks which should be perfectly aseptic and hermetically sealed, when treating a case of yellow *fever His own method before making an inoculation* is to dissolve 5 centigrams of residuum in 1 gram of pure water, then inject with a Pravaz syringe

In the brief discussion that ensued Dr Woodhull expressed his thanks to both writers and the authors of the foregoing papers for their contributions on yellow fever, and particularly for the last one The reading of that paper was to him exceedingly interesting as he thought it was to all the gentlemen present

DR FORMENTO—said that there is a great future in the study of the prophylaxis of this disease Since 1880, yellow fever has, been kept out of New Orleans as all cases are quarantined at the quarantine station in the river below the city He had no doubt that the substance found in the urine of patients suffering from yellow fever will produce immunity from the disease to others if they permit themselves to be inoculated in the manner described by Dr Carmona y Valle

A paper was delivered in Spanish by DR JESUS E MONJARAS of San Luis Potosi, Mex, "On the Necessity for the Establishment of Sanatoria to Prevent Chlorosis as the best Prophylactic against Consumption in Particular, and Constitutional Diseases in General," upon which there was no discussion He was followed by DR GREGORIO MENDIZABAL of Orizaba, Vera Cruz, Mex, who read a paper

ON BATHS, THEIR NECESSITY, THEIR INFLUENCE IN ECONOMY, THE DANGERS THEY PRESENT, AND THE METHODS OF PREVENTING THEM,

of which these excerpts were taken cleanliness is without dispute, the fountain of beauty, as it is also the most pure spring of human health The writer referred to the fact that cleanliness is a preventive of disease The importance given to bathing by the Egyptians Persians, Greeks, and above all the Romans was considered The first act of Eastern hospitality during the remote ages, consisted in offering a bath to the traveler seeking the shelter of a roof The gigantic Roman ruins, and the degree of prominence given to ablution in that exalted nation whose legions triumphantly traversed the greater part of the then known world was dwelt upon Unfortunately civilization, the corruption of morals, as John Jacob Rousseau says converted in an evil day those fountains open to all as well to the high born as the plebeian, the rich as the poor, the wise as the ignorant, and from which those people obtained such benefits to health and virility—into amphitheaters of corruption and iniquity, into centers of depravity and effeminacy, making them abominable in the eyes of men of pure heart and habits who succeeded the villified race of that abject Roman Empire These institutions having gone out of use, it was necessary to go slowly again over the same ground and provide the social classes with the most easy and economical means of cleansing their bodies and clothing, as well as to preserve them from the thousands of ailments emenating from negligence and ignorance

This is one of the *many*, and perhaps most interesting propositions of contemporary hygiene, and the boards of health have *not* been idle, *and their gospel* has begun to bear fruit We note with satisfaction the rivalry between modern cities in procuring for each inhabitant the greatest possible number of gallons of water, and supplying it so cheaply as to place the means of cleansing within the reach of even the most destitute of our race The advantages of hygiene were further proclaimed to show that the indifferent and indolent poor would be benefited by a strict observance of it The physiologic and therapeutic properties *of cold water were noted*, how it raises the standard of health, invigorates the most debilitated constitutions, and assuages nervous excitement, etc The shower bath is a good tonic because it gives rise to a *healthy perspiration* It does not irritate and one is less exposed to a cold than in a tub because the duration is very *short* the body *is more thoroughly* cleansed as all impurities are removed *from* the skin by the continually new and pure falling water It satisfies *also the demands of economy* without any extra expenditure of water

Public baths have reached the highest state of perfection in Germany, Austria and England, and these countries have produced in the last fifteen years the largest number of scientific works on the subject

The city of Berlin shows with pride to travelers her bathing department in the barracks of the Grenadier Guards wherein 300 soldiers can bathe themselves hourly, each consuming only from 10 to 15 liters of water

The City of Mexico which had hitherto *only a supply of from 65 to 70 liters* of water per *inhabitant, will* double this allowance within a short time and will augment the number of modern bathing centers where prices will be arranged within the reach of all

The government is now constructing a bathhouse in Lagunillas Square, applying to the object a private donation, in which the poor will find hot and cold shower baths, with the further privilege of having their soiled linen washed while they are on the premises

The speaker then dwelt upon the manner in which diseases may be contracted in badly kept and imperfectly cleansed tubs, through the use of sheets *towels*, combs, brushes, etc, he recited the various kinds of disease that had come under his observation contracted in this manner and concluded by saying, the necessity of having public baths kept absolutey clean is imperative, otherwise they act as disease disseminators

An abstract of a paper on

SMALLPOX IN WISCONSIN FROM JANUARY 1894, TO JUNE, 1895,

was presented by DR U O B WINGATE, *of* Milwaukee, Wis

The State of Wisconsin has an average length of about 260 miles, breadth 215 miles, and an area of 56,000 square miles, or 35 840,000 square acres In other words, its territory is nearly equal to that of England and Wales together The highest elevations are about eighteen hundred feet above the level of the sea, and the lowest six hundred feet It is divided into seventy counties, and has a population, according to the census of 1895, of nearly 2,000,000 It has one city of about 250,000 population, and a total of 1,235 cities, villages and towns, out of which number there are 48 cities with a population ranging from 25,000 to 40 000 respectively Each city, village and township is required by law to have an organized local board of health, consisting of a chairman, a secretary and a health officer, who is the executive officer of the board There are a few townships in the sparsely populated districts that have not conformed to the requirements of the law There are, however, about 475 legall organized local boards of health in the State

Prior to 1894, smallpox had not existed in the State for a number of years with the exception of now and then a sporadic case At the beginning of 1894 the disease showed an alarming increase in the city of Chicago, Ill During January of that year three cases occurred in the interior of this State and one in the city of Milwaukee The disease did not seem to spread from these cases, but soon after it began to appear in different places throughout the State In some instances it could be traced directly to Chicago The State Board of Health adopted its vaccination rule which required that no child could be admitted to school without presenting a certificate of successful vaccination This rule was of general application throughout the State It also urged vaccination of all teachers, inmates and employes of all institutions, factories, etc There was, however, a very active anti-vaccination society at work in the city of Milwaukee, and its influence spread more or less over certain portions of the State, but subsequent reports showed that the rule was very generally observed, and especially in those localities where the disease made its appearance

The disease increased and reached its height in the State about the middle of October, 1894, when it began to decline and entirely disappeared in the month of June, 1895 It appeared in thirty-one out of the seventy counties, and in fifty-eight places A table showing the number of cases in each county, and number of deaths was then given Out of the total number of 1,412 cases throughout the State, with 352 deaths, 1,197 cases occurred in the county and city of Milwaukee, with 299 deaths

The total death rate in the State was 24 92 per cent, while in the city of Milwaukee there were 1,060 cases with 271 deaths or 25 56 per cent Out of this number 575 cases were treated in the hospital with 134 deaths, giving a death rate of 22 53 per cent Four hundred and eighty-five cases were treated in houses, with 137 deaths, giving a death rate of 28 25 per cent Out of the 1,060 cases, a history of vaccination was obtained in 1,016, 343 of which gave a history or presented evidence of vaccination some time prior to the attack Of this number, 35 died, or 10 21 per cent Six hundred and seventy-three cases gave a history of having never been vaccinated Of this number 191 died, or 28 38 per cent

In several instances the disease was promptly stamped out If a second focus of infection was introduced some weeks or months subsequently, again it would be promptly stamped out

In the majority of instances, public sentiment sustained the State laws, which are ample and sufficient, if properly enforced, to control an outbreak of contagious disease of any kind in Wisconsin Although great difficulty was at first encountered in the city of Milwaukee, for a time, to overcome the prejudice of a certain class who did not appreciate the value of sanitary law and its enforcement, riotous demonstrations occurred which are already a matter of history

Vaccination to be effective must be repeated sufficiently often to keep the system immuned from the disease, and until that time comes there will be smallpox Until every person will take it upon himself to be re-vaccinated every four years, on the same principle that he would have a fire or life insurance policy renewed when it runs out, we can never expect to be absolutely protected from smallpox Some persons vaccinated in infancy may remain immune for a lifetime, while with others immunity will last only a few years The only safety is in oft-repeated vaccinations, Pure certainly as often as every five years lymph should be propagated absolutely under the control of the State or National government, and should be taken out Until this of the hands of commercial interests is done it is no wonder that the people, or quite a proportion of them, oppose vaccination on the ground of impure and The writer believes this is unreliable vaccine true also of the antitoxins and similar products used for immunizing purposes Successful vaccination with pure effective vaccine, and isolation of cases, are the two great weapons upon which we must rely to control outbreaks of smallpox, and to carry these two means into effect we must have both law and education

The death rate, as shown by all statistics with which the author is acquainted, show that cases treated in properly constructed and properly managed isolation hospitals is decidedly less than of those cases treated in homes In the great majority of instances, in cities especially, cases of smallpox can not be properly isolated at home without People should be taught danger to the public the advantages, not only to themselves but to their neighbors, of being removed to isolation hospitals for treatment Another great work to be done, is to educate communities up to the importance of appropriating a sufficient amount of money to erect and maintain in every city suitable hospitals which should be in every way so well equipped that no complaint can be brought against them, and which should be maintained at public expense, that the comforts enjoyed therein by patients ill with contagious diseases are equal to or greater than those enjoyed in the majority of homes By such provisions, epidemics of smallpox can be easily controlled, and not only life and health saved, but the enormous expense to every community which necessarily occurs in which any extended outbreak of this disease exists

President-elect Liceaga was then escorted to the chair by Drs Formento and Horlbeck and formally inducted into office

Senors —I consider the honor bestowed upon me as an honor to my country, and I thank the Association I consider that among my own countrymen present, there are men more worthy of the honor, and on that account I feel a personal debt of gratitude to the Association I can assure the Association that my deficiencies will be compensated by devoting all my intelligence, good will and energy to become worthy of the great honor conferred upon me

President Bailey the retiring executive officer, thanked the Association for courtesies shown him, and assured his friends that the occasion would be one of the delights of his lifetime He then adjourned the Association at 11 35 o'clock to reconvene at the Antlers Hotel, Colorado Springs on Monday morning at 10 o'clock October 7

Colorado Springs, Colo, Monday, October 7 —About one hundred members of the American Public Health Association visited this city last Saturday and remained over until to-day The citizens and medical profession of Colorado Springs and Manitou entertained the Association in a luncheon at Broadmoor Casino and in a trip to Cheyenne canon and other points of interest in the Pike's Peak region, including a drive through Glen Aerie, the Garden of the Gods, etc, this program was carried out to the letter The remaining visiting members passed a resolution of thanks for the numerous courtesies and hospitalities they received during their brief sojourn in this beautiful city, after which the Association adjourned *sine die*

Some arrangements had been made to start from the Union depot in Denver on Friday afternoon after adjournment, for a trip around the famous "Georgetown loop" to Silver Plume This included a "stop over" at Idaho Springs, but the inclement weather then prevailing made the undertaking too hazardous and it was therefore abandoned

Thursday afternoon the 3d inst, the members with their families and invited guests indulged in a trolley ride about the city and suburbs which included about forty-five miles, starting from the headquarters at 2 o'clock This was tendered by the Denver Chamber of Commerce The ride included a visit to the Zoological Gardens at the outskirts of the city Many members also availed themselves of the invitation extended by Col and Mrs A A Woodhull, to an afternoon tea where the genial host and hostess entertained the visitors at their hospitable home, 1020 Logan Avenue, on Wednesday the 2d inst, the lady delegates and visitors were invited to an afternoon tea given by Mrs N P Hill at her residence, corner of Fourteenth and Welton Streets This proved to be a most enjoyable and delightful affair During the evening, a reception for the members and their friends was given in the parlors of the Brown Palace Hotel The De Harport orchestra was in attendance, and the care with which the details of the reception were carried out made it a perfect success It was stated that there were upward of 400 ladies and gentlemen present during the evening The parlors were beautifully embellished for the occasion It was while this was in progress shortly after 9 o'clock that the Mexican delegation arrived which altogether included fourteen members During the day also at various intervals, the program was varied by a visit to the Denver Athletic Club and to the Smelters, in a tally ho which was furnished by the Local Committee of Arrangements

Tuesday evening, the 1st inst, after the open public meeting in Trinity M E Church, the program was of a semi-social and semi formal character His Honor the Mayor, and Mrs T S McMurray, Dr and Mrs J H Gower, Dr and Mrs Henry Sewall, Dr and Mrs J N Hall introduced the guests to the citizens

Monday afternoon the 30th, at 1 30 o'clock the members and their friends were invited by the Denver Union Water Co, to inspect the water works of the mountain supply in the Platte canon, twenty two miles from Denver Special cars were provided for the occasion, also dainty refreshments However pleased the Association might have been with the source of Denver's water supply for drinking and domestic purposes it did not formally indorse it

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SATURDAY, OCTOBER 26, 1895

CONCERNING PORTRAITS

Animum pictura pascit inani —VIRGIL
And with the shadowy picture feeds his mind '

We have had many letters from members of the ASSOCIATION making inquiry about the probable disposition of the photographs of the members, which this JOURNAL has been receiving from time to time for the last six months

Some other journals have even been facetious when mentioning the matter The truth is that few things are of more interest historically than the pictures of the men who make the history, and from the earliest times it has been a common complaint that the world was indifferent to contemporary portraits

PLINY ("Natural History") lamented that his age possessed no portraits of living men "Correct portraits of individuals," says PLINY, "were formerly transmitted to future ages by painting, but this has now fallen into desuetude Brazen shields are now set up, and silver faces with only some obscure traces of the countenance, the very heads, too, of the statues are changed, a thing that has given rise before now to many a current sarcastic line, so true it is that people prefer showing off the valuable material to having a faithful likeness And yet, at the same time, we tapestry the walls of our galleries with old pictures, and we prize the portraits of strangers, while as to those made in honor of ourselves, we esteem them only for the value of the material, for some heir to break up and melt, and so forestall the noose and slipknot of the thief Thus it is that we possess the portraits of no living individuals, and leave behind us the pictures of our wealth, not of our persons And yet the very same persons adorn the palæstra and the anointing room with portraits of athletes and both hang up in their chamber and carry about them a likeness of EPICURUS "

PLINY referred with pleasure to the practice of his ancestors, so entirely different Family portraits were arranged each in its separate niche, to be always in readiness to accompany the funeral processions of the family, occasions on which, by this practice, every member of the family that had ever existed was always present

"Indeed," says PLINY, in concluding his interesting chapter on portraits, "it is my opinion that nothing can be a greater proof of having achieved success in life, than a lasting desire on the part of one's fellow men to know what one's features were This practice of grouping portraits was first introduced at Rome by ASINIUS POLLIO " It was VARRO who first inserted portraits in books

"What," says the elder D'ISRAELI[1], "is more agreeable to the curiosity of the mind and eye than the portraits of great characters? An old philosopher whom MARVILLE invited to see a collection of landscapes by a celebrated artist replied, 'Landscapes I prefer seeing in the country itself, but I am fond of contemplating the pictures of illustrious men ' This opinion has some truth, LORD ORFORD preferred an interesting portrait to either landscape or historical painting 'A landscape,' said he, 'however excellent in its distributions of wood and water and buildings, leaves not one trace in the memory, historical painting is perpetually false in a variety of ways, in the costume, the grouping, the portraits, and is nothing more than fabulous painting, but a real portrait is truth itself and calls up so many collateral ideas as to fill an intelligent mind more than any other species ' "

It is a false pride which refuses to have a picture taken "Do you not think," said DASSIER, the painter, to MONTESQUIEU, "that there is as much pride in refusing my offer as in accepting it?"

The voice of antiquity, not less than that of modern curiosity, urges us to make these collections of our contemporaries while we can, and before TIME, that subtle painter, shall have changed all the lineaments that made the physiognomy characteristic of our friends in the active period of their labor

ADDISON, who placed the line from VIRGIL which we quote at the head of this article, at the beginning of his charming vision of a picture gallery, observed "an old man creeping up and down from one picture to another, and retouching all the fine pieces that stood before me I could not but be attentive to all his motions I found his pencil was so very light that it worked imperceptibly, and after a thousand touches, scarce produced any visible effect in the pictures on which he was employed However, as he busied himself incessantly, and repeated touch after touch without rest or intermission, he wore off incessantly every disagreeable gloss that hung upon a figure He also added such a beautiful brown to the shades and mellowness to the colors, that he made every picture more perfect than when it came fresh from the master's pencil I could not forbear looking upon the face of this ancient workman, and immediately by the long lock of hair on his forehead discovered him to be TIME " And so, while TIME may produce the "wrinkled front," he blends the wrinkles deftly, until the face most worthy of protracted study is that of the sage, mellow with age and accumulated wisdom

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[1] Curiosities of Literature

Let then, our old and young members alike aid in furnishing our portrait gallery with their pictures They will be deposited in the ASSOCIATION Library, as among the most sacred archives of our noble ASSOCIATION What would our generation give for an authentic portrait of HIPPOCRATES or GALEN, or of the medical masters of medieval times, and yet our time will some day be quite as remote from distant posterity Opportunity may indeed prevent this age from producing a counterpart of HIPPOCRATES or GALEN, but measured by the sum total of the reduction of human suffering, the age that produced anesthesia can never be uninteresting or unimportant

THE COLOR SENSE AND RAILWAY AND SEA SIGNALS

The importance of systematic examination of the color sense in seamen and railway employes is now so thoroughly recognized that it is perhaps commonly thought that all the requirements for the safety of life and property are met by the system now in vogue The complete weeding out of all who show defects of color vision from these employments is the ideal of the ophthalmologists and of those who have made a specialty of this subject, like DR JEFFRIES, of Boston, and some others Against them, however, there is sometimes raised a voice, for example, DRS DIBBLE and OUTTEN at the last meeting of the Association of Railway Surgeons, and MR F FERGUS, in a recent issue of the *Glasgow Medical Journal* These objectors assert that there are cases that are rejected by the usual tests that are perfectly competent to meet all practical emergencies, and that any rigid tests apart from those directly practical sometimes work injustice It is asserted also by some, that considering the fact that 4 per cent of males are more or less defective in their color vision, there ought to be a larger proportion of accidents by land and water directly traceable to these defects during the many years that these defective individuals have been employed

DR W R GOWERS, in a communication in the *Lancet*, last March, asked for direct evidences of accidents due to this cause, the replies he received were surprisingly few in number, and the instances given were in part those mentioned by JEFFRIES, which are, so to speak, the classic ones in the literature

Recognizing however, as one must, the difficulties of establishing all the causes of accidents by rail or sea, it may be admitted on *a priori* grounds that the element of defective color vision is an important one among the possibilities of danger, and that it should be adequately guarded against The examinations can be made sufficiently practical and, where actual hardship results especial care should be taken and some compensation afforded if justice demands it There is more danger probably in the defects of those who can pass the examination successfully than in the chance of a case of imperfect color vision passing it, or in the possible laxity of the tests

The dangers from color blindness are not confined to those who reveal it in sorting worsteds or even to the spectroscopic tests It is a temporary symptom of many possible pathologic conditions, alcoholism, hysteria, tobacco saturation, it may be a relic of acute disease, convalescence from which seems to be complete, and lastly it may probably be sometimes the direct temporary result of mental stress, so that in certain emergencies where it is most needed it may be wanting These cases are the more dangerous in that they are unsuspected, and caution and suspicion are done away with by the successful result of the prior examination To trust human life implicitly and solely to the perfection of so delicate and easily deranged a function, when additional precautions for safety are practicable and readily available, would seem to be almost criminal when all these facts are taken into consideration

Color blindness in these cases, as well as probably in many congenital ones, as was maintained nearly fifteen years ago by BANNISTER and BURNETT, is probably a psychic rather than a retinal disorder, and this psychic factor is a possibility to be always considered The danger, therefore, is that we shall depend too much upon a refinement of a sensory function that is defective in an appreciable percentage and may possibly fail under critical circumstances in a much larger proportion

The advisability of supplementing the color signals by some other and more efficient device has long been recognized by practical navigators, and it is efficiently done upon the inland waters of the United States by the use of range lights on steamers, which has lately been made compulsory also on the lakes They have the advantage over the colored lights, of greater range of visibility, of being distinguishable at all times, and of affording data by which to ascertain the exact course of the approaching steamer Whether any analogous arrangement is equally available in railway practice is perhaps a question, but there can be no doubt that a semaphore arrangement of lights for a danger signal would always be a most useful addition to the colored lights now employed

The subject has important medical as well as practical bearings, and it would be well were it fully discussed in the medical press

UREMIC PERICARDITIS

The frequency of pericarditis in chronic nephritis is well known BUHL (*Mittheilungen a o pathol Institut München*, 1878) estimated the frequency at 35 per cent of the observed cases, BAMBERGER, (*Volkmann's Sammlung klin vortrage*, 1878, No 173) at 14 per cent and WAGNER (*Ziemssen's Encyclopedia*, 1882) observed pericarditis fourteen times in 150 cases of chronic nephritis Many of the earlier writers believed the cause of this inflammation of the pericardium, as well as of other tissues, in the course of chronic nephritis, to be toxic substances circulating in the blood which the kidneys failed to eliminate Under the influence of the study of bacteriology the opinion gained ground that pericarditis in connection with nephritis must be due to an accidental infection, and this was the view expressed by LECORCHÉ and TALAMON in their treatise of albuminuria and Bright's disease published in 1888

It is self-evident that in order to determine the exact cause of the pericarditis in a given case, resort must be had to the modern microscopic and bacteriologic examination of fresh material as soon after death as possible There are already a few records published of the examination of such cases and especially by BANTI of Florence He described a case of pericarditis in a uremic in 1888 (*Deutsche med Wochenschrift*, No 44, 1888) in which the exudate and the tissue of the pericardium seemed absolutely free from bacteria as far as could be determined by microscopic examination, by culture experiments and by inoculation into animals BAUMGARTEN (*Baumgarten's Jahresbericht*, Bd IV) was inclined to think that the inflammation in this case was due to microorganisms that had died before the material was examined, but BANTI was not inclined to accept this criticism because the pericarditis had existed only seven days before death Last year (*Centralblatt für Allg Path u Path Anat*, Bd V, No 11) BANTI described a new case of pericarditis in uremia due to arterio-sclerotic interstitial nephritis, in which the exudate and the tissue of the pericardium were found free from microbes after the most thorough examination according to the best methods Aërobic and anaerobic culture experiments were made with large masses of the exudate upon a variety of media, but all remained sterile In this case the clinical manifestations pointed to the existence of the pericarditis for about four days before death

BANTI consequently concluded that in the light of the results obtained from the study of these two cases, the pericardial inflammation was due to toxic substances circulating in the blood in consequence of failure of elimination through the diseased kidneys He then made some animal experiments and found that rabbits in which the pericardium had been cauterized, developed a more marked fibrinous pericarditis after nephrectomy or ligation of the ureters, than animals in whom the cauterization of the pericardium only was made, and which were killed after the same length of time in which the uremic animals died While these experiments were not conclusive, yet they seem to support the theory of uremic pericarditis

In October, 1894, BECO (*Centralblatt für Allg Path u Path Anat*, Bd V, No 19) describes a germ-free case of sero-fibrinous pericarditis in a chronic nephritic, which he is inclined to interpret as due to toxic substances produced by the bacillus coli communis which was present in the blood and in the spleen This view is supported by certain experiments of CHARRIN (*Sem Medicale*, 1894, No 42, p 337) which seem to show that the bacterial toxins may cause serositis without the immediate presence of the corresponding microorganisms In March, 1895, (*Centralblatt für Allg Path u Path Anat*, Bd VI, No 5) BANTI describes two additional cases of uremic pericarditis in which there were no bacteria either in the pericardium, in the blood or in the spleen, and he concludes that the presence of the bacillus coli communis that BECO found in his case was accidental and due to agonal or post-mortem invasion

From these interesting observations it does not seem unreasonable to believe that there may be a "toxic inflammation" independent of all direct bacterial influence Such observations as BANTI's and others, indicate the necessity of a thorough bacteriologic examination of all cases of pericarditis and other serositis in connection with kidney lesions in general The results obtained are in full harmony with the views concerning auto-intoxication that are rapidly gaining credence at the present time

INADEQUACIES OF ARBITRARY MILK STANDARDS IN ENGLAND—THE "APPEAL TO THE COW"

MR RICHARD BANNISTER, one of the best known officers of the Local Government Board of Great Britain, recently occupied the chair as President of the Section on Chemistry and Climatology of the Congress at Hull of the British Institute of Public Health His presidential address treated chiefly of the work being done by the governmental bodies for the restriction of food products adulteration He regards the laws as amply framed for the protection of any community, and those communities are blameworthy that refuse to act thereunder Adulteration is sometimes alleged, especiallly in respect to imported foods, when it does not exist The existing laws have already effected an incalculable amount of good, notwithstanding the lukewarm support given them

At this point in his address, according to the *Sanitary Record*, he turned his attention to the all-important subject of the milk supply, a subject which he held was attended by many more difficulties than is commonly admitted He presented facts and figures going to show the great necessity to study the milk and butter question in all its bearings, and to see what difficulties there were in the way of carrying out this part of the analyst's duty with justice alike to himself, the producer, and consumer With regard to milk, many difficulties would be removed if the statement made by an expert to the Parliamentary Committee on Adulteration in 1894 were true, that the quantity of fat varied in milk, but the other constituents were wonderfully constant, and they hardly varied at all, and that according to certain rules he could tell how much water had been added to a given sample of milk, or how much cream had been taken from a given sample of milk This unfortunately is not the case Government officers have publicly declared that it would not be in accordance with the design of the Act that a poor man should be subjected to penal proceedings because his cow does not produce as good milk as the better herds of his richer neighbors It has been suggested that a legal standard for milk should be adopted, and that this standard should be the average composition of commercial milk

The hardship of such a standard would be felt by persons keeping a few cows or a single cow in country places, but in the case of town supplies the large distributor would be able to lower this standard by the help of separated milk Again, another point arose, calling for settlement Cows supplying milk under contract were kept as simple milk-producing machines, kept up and fed in such a way as to produce the maximum quantity of milk of the contract quality Was milk so produced, though richer in fat and "solids not fat," as wholesome as that produced by the cow when living under normal conditions? In other words, was the percentage of "solids not fat," and fat, the true standard of value of cow's milk when taken as an article of food? This standard had been taken because it required no question to be asked or inquiries to be made as to the origin of the milk under examination, but in the case of direct milk supply to the consumer by the producer this standard needs to be modified, and in fact, it had been modified, by the magistrates The raising of the standard would not secure the purity of the milk The large distributors would be able to make larger profits than they do now, and the small producer would be more frequently prosecuted for adulteration through no fault of his own In Manchester and Salford the sale of adulterated milk appeared to have been reduced to a minimum, the percentage of adulteration in Manchester being 5 4, and in Salford 3 1 This had been brought about by *appealing to the cows* supplying the suspected milk whenever such an appeal could be made The plan was an expensive one at first, but it eventually paid, and caused the *minimum of hardship to producer*, distributor, and consumer In conclusion, the author of the address said

"Much of the evidence which had been given with reference to mixtures was only a repetition of what was said twenty years ago, before the 1874 Commission, but it had been strongly shown that the trade labored under great hardships from the following causes 1, the non-acceptance by magistrates trying adulteration cases of the certificate of the analytic chemist employed by the defendant, which necessitated his appearance in person at considerable expense; 2, the refusal of the magistrates to allow the defendant his full costs when the case was decided in his favor, and 3, the refusal of some magistrates to allow an appeal to the referees under the Act, and of not accepting the certificates of referees as evidence in the case In all such cases justice must be blind, no prejudice must be imparted into the proceedings on one side or the other, and as the proceedings under the Adulteration Act were criminal, it was their duty to lean to the side of mercy and only proceed when the case was free from doubt The large majority of manufacturers and tradesmen of this country were desirous of suppressing adulteration, and were ready to cooperate with the authorities in so doing It would, therefore, be a misfortune if by harsh measures they lost the sympathy and support of the right-minded, who were willing to aid them in their great movement of protecting the food supply of the nation from adulteration, or of creating an impression in the minds of the Legislature that the legitimate trade of this country was being fettered and injured by their action "

None of the foregoing conditions apply in this country to any extent, and our chemists have a more elastic scale of allowance for the fat percentage There is only one reason why milk dealers are prosecuted in the United States, that is for adulteration, and the fat percentage is only taken into account in our analyses when it falls so low as to show that water has been added The "trade" in this country, have no reasonable complaint, and what the public wants and will have, if it can get it, is pure milk

MEDICAL EXAMINER'S FEES

Elsewhere we print a letter from a correspondent who invites attention to recent action of certain life insurance companies, whereby the fees of the medical examiners are to be reduced This reduction is based on the amount of insurance applied for It is inconceivable that the companies suppose that an examination can be any *different in one case than in* another All cases require the same care and skill, and the same amount of the examiner's time The amount of money involved in the risk is of absolutely no consequence to the examiner, however much the company may be interested, and we think so unjust a plan should be promptly receded from

The majority of examiners are already underpaid, as some of the companies only allow a pittance for an examination requiring not only a great deal of technical knowledge, but the exercise of the highest quality of skilled service, and ability as a cross-examiner

CORRESPONDENCE

A Convenient Test for Color Blindness

La Fayette, Ind , Oct 14, 1895

To the Editor —Being called upon frequently to make color tests for railroad employes, I have been using a method which Dr Carrow of Ann Arbor gave us in a course on ophthalmology Whether it has been published or not, I can not say If it has, this will emphasize its importance and convenience, and if not, will describe it for the first time The skeins of wool have been abandoned as consuming too much time and occupying too much space

The test consists of a sample card of Corticelli embroidery silk On the folding card are 269 colors all named Over the names must be pasted blank paper to hide them These colors may now be numbered consecutively In testing, we direct the patient's attention to one of the colors , blue, green or red We will take, for example, blue, and ask *him* if he sees any color in the green or red column of colors to correspond If he says, no, we point out to him the red, and ask him if there is anything in the blue or green column to correspond If he answers, no, we may then ask him *to name* and point out the colors we have been comparing If he answers correctly, he is not color blind to these colors so important in railway service He must not be told the name of any color He must tell the examiner correctly

On the other hand, however suppose we point out to him a simple blue and ask him if there is any color on the card to correspond and he says there is, and points to green, for example, we know him to be blind to either blue or green To which one, is easily ascertained by asking him the name of the color to which we directed his attention first If he calls the blue color, green, we know that he is blind to blue and *vice versa* If he should say the red is like the blue, we know him then to be color blind to either red or blue To find out which, we need only ask him to name the colors If he calls red, blue, we then know him to be blind to red and *vice versa* If red and green correspond in color to him, his color blindness will be ascertained as above The rest of the card may be used to ascertain the different shades of different colors to which the applicant may be blind

Geo F Keiper, M D

Life Insurance Companies Reduce Fees

La Fayette, Ind , Oct 18, 1895

To the Editor — Both the Equitable and the New York Life Insurance Companies have lately adopted the graded scale of fees to local medical examiners, thus

For three thousand dollars or less of insurance	$3
For from three to twenty-five thousand	5

To be brief and plain, I inclose the blank just received from the New York Life Insurance Company, it explains itself

By the examination of the books of one of our oldest and most reliable life insurance agents in La Fayette, I find that nine out of ten applications for policies are for a less sum than $3,000 insurance showing that this graded scale of fees means a cut of about 40 per cent from old and established rates I do not believe that the doctors throughout the country appreciate this, and I wish most earnestly that you would write one of your instructive editorials on this subject to appear in the Journal at an early day The Equitable circular announcing a reduction of fees is similar to this , in fact, it is my remembrance that it is the same

With best wishes for the Journal and its editor, officially and personally, I am, dear Doctor,

Very truly yours W W Vinnedge, M.D

PUBLIC HEALTH

Antistreptococcin —The *New Remedies*, September, gives a brief reference, from its foreign correspondence, to a new remedial serum bearing the name in the caption It is the latest of the antitoxic serums It has been developed and brought into the therapeutic field by Professor Marmorek "It is said to destroy the pathogenic streptococcus absolutely, and will therefore prove of inestimable value in conditions which are now usually abandoned as hopeless The serum is injected in routine style and does not produce side or after effects" Marmorek is conducting clinical experiments which will be published as rapidly as consistent with reliability Early reports thereon have been promised

A Health Officer Vindicated —The Bulletin for September of the North Carolina Board of Health gives notice that Dr John L Ray, of Burnsville, the Health Superintendent of Yancey County, has received a handsome vindication from certain accusations against him that had found their way into the Public Documents of the State Typhoid fever occurred in the county jail which was in an unsanitary condition There were five cases reported as originating there, and from them not less than twenty-four cases were developed among the townspeople Dr Ray used due diligence in reporting the cases, in applying disinfectants, and in urging the cleansing of the jail by the officers having charge of that institution Notwithstanding his courageous efforts, the Public Documents contained a severe criticism, alleging neglect of duty This criticism, when sifted, was found to be based in part upon a forged report by a clerk of the court The vindication of Dr Ray is found in a numerously signed certificate as to the qualifications and energy of the Superintendent, and as to the falsity of the allegations published in the Documents Among the signers of the certificate are the physicians of the town, or nearly all of them, the mayor, the postmaster, the Representative, the marshal, an alderman, a justice and a score of lawyers and merchants It appears from the Bulletin, that a betterment of the condition of the jail has been effected, following upon the appointment of a new jailer, together with a reduction of the dangers to the community from typhoid fever The Bulletin congratulated Dr Ray on the fact that his courage and efficiency have been vindicated beyond question by a host of competent witnesses

Health Reports.—The following health reports have been received at the office of the Supervising Surgeon-General, Marine-Hospital Service

SMALLPOX—UNITED STATES

New Orleans October 5 to 12, 2 cases, 2 deaths
Michigan Battle Creek Twp , October 5 to 12, smallpox reported , Detroit, October 5 to 12, smallpox reported
Wheeling July 1 to September 30, 3 deaths
Tennessee Shelby County, September 15 to October 15, 3 cases , Memphis, September 15 to October 15, 4 cases

SMALLPOX—FOREIGN

Antwerp September 21 to 28, 1 death
Cairo September 9 to 16, 2 deaths
Calcutta August 31 to September 7, 2 deaths
Corunna July 1 to September 30, 1 death
Dublin September 21 to 28, 18 cases, 2 deaths , Dublin, September 28 to October 5 11 cases, 1 death
London September 21 to 28, 234 cases, 2 deaths , London, September 28 to October 5, 1 death
Madrid September 24 to October 1, 1 death
Manchester September 21 to 28, 4 cases
Montevideo August 31 to September 14, 2 cases, 1 death
Naples September 28 to October 5, 1 case, 1 death
Odessa September 21 to 28, 1 case
Prague September 21 to 28 2 cases
Rio de Janeiro September 7 to 21, 135 deaths
Rotterdam September 28 to October 5, 2 deaths
St Petersburg September 14 to 28, 10 cases, 1 death
Southampton September 28 to October 5, 1 case
Trieste September 21 to 28, 2 cases

CHOLERA

Calcutta August 31 to September 7, 6 deaths
Cognac September 29 to October 5, 1 death
Madras, August 31 to September 6, 6 deaths
Osaka and Hiogo, September 7 to 21, 99 cases, 77 deaths
Tangier September 1 to 30, 800 cases, 600 deaths
Honolulu August 18 to September 28, 87 cases, 62 deaths
Damietta October 15, 15 cases, 8 deaths
Japan fifty cities and towns September 13 to 19, 3,336 cases, 2,080 deaths
From beginning of epidemic to September 19, 46,009 cases, 31,198 deaths

YELLOW FEVER

Cienfuegos, September 6 to 13, 2 deaths, Cienfuegos, September 30 to October 6, 4 deaths
Rio de Janeiro September 7 to 21, 6 deaths
Sagua la Grande September 28 to October 12, 30 cases
St Johns, Antigua September 23 to 30, 3 cases, 3 deaths
Santiago de Cuba September 28 to October 12, 19 deaths

NECROLOGY.

Surgeon-General Sir Thomas Longmore, C B—We regret to announce the death of Surgeon-General Sir Thomas Longmore, C B, which occurred Sept 30, 1895 He was born in London, Oct 10, 1816 His father was a surgeon in the Royal Navy He was educated at Merchant Taylors School In due course of time he became a student at Guy's Hospital He was dresser to Mr Bransby Cooper, assisted that surgeon in his private practice and in writing the life of Sir Astley Cooper He arranged and catalogued the museum of that great surgeon, afterward purchased by the Royal College of Surgeons of England He became M R C S Eng, 1841, and F R C S, 1856, and Fellow of the Royal Medical and Chirurgical Society He was gazetted Assistant Surgeon 19th Regiment Feb 3, 1843, served with that regiment in the Ionian Islands, the West Indies, and Canada, returning to England in 1851 He was gazetted Surgeon of his regiment in March, 1854, and served as Surgeon of the 19th Regiment in the Light Division of the Eastern Army, from its first taking the field throughout the campaign of 1854–55, until the termination of the siege of Sebastopol, he was not absent from duty one day during the campaign He was present at the affair of Bulganac, battles of Alma and Inkerman, capture of Balaclava, assaults on the Redan June 18 and September 8, and received the medal and three clasps, and the Turkish medal, and was named a Knight of the Legion of Honor He served with the 19th Regiment in the Sepoy Mutiny war until promoted Deputy Inspector-General of Hospitals in 1858 On his return to England he was appointed P M O at Colchester In 1860 he was appointed by Lord Herbert, then War Minister, Professor of Military Surgery at the new Army Medical School, and delivered the opening address in the presence of that Minister, the General Commanding the District, and other officers of distinction

In 1864 he represented the British Government at the International Congress at Geneva At this Congress the International Treaty, since known as the Convention of Geneva of August 22, 1864, was formally adopted, and he was a member of the Committee that settled the terms of the Convention In 1867 he took part, by order of the Secretary for War, in the international conferences of the societies for aid to wounded soldiers in time of war In 1867 he was nominated a Companion of the Military Division of the Most Honorable Order of the Bath, and in the following year he was gazetted Honorary Surgeon to Her Majesty the Queen In 1866 the Société Impériale de Chirurgie de Paris elected him Correspondant Etranger In 1869 he again represented his Government at a Conference in Berlin on Aid to Sick and Wounded in War In 1872, and again in 1873 and 1876, Surgeon-General Longmore represented the British Government at Vienna and Brussels for the settlement of international agreements relating to sick and wounded in war, and took, in a mixed committee of military and medical officers, an active part in establishing the bearer companies, and most of the existing field hospital arrangements of the British Army On five other occasions he represented his Government at foreign congresses, and was elected an Associé Etranger of the French Academy of Medicine and other scientific societies In 1879 he was promoted by decree of the President of the French Republic to the rank of Officier in the Legion of Honor, the insignia of which, by Royal license, he was permitted to wear In 1886 he was knighted by the Queen at Osborne, and in the following year the Military Medical Services presented the fine portrait of Surgeon General Longmore to the Army Medical Department, by George Reid, R S A, of Edinburgh, which adorns the anteroom of the mess-room at Netley

This Journal for August 24, 1895, contained an exhaustive review of Sir Thomas Longmore's last published work

James Collins, M D, died suddenly of heart failure, on the 7th inst, at his home in Philadelphia Dr Collins was 65 years of age, and a native of Pennsylvania He was a well-known surgeon and had been connected with the German Hospital of Philadelphia, as a prominent member of its staff for thirteen years, and was also a member of the American Medical Association He attended the Philadelphia County Medical Society regularly and was a highly valued member At its meeting held September 25, the President being absent, Dr Collins was, on motion, elected chairman *pro tem* He was graduated by the University of Pennsylvania, Medical Department, in 1860 and afterward by Göttingen University He was appointed Surgeon of the 3rd Regiment Pennsylvania Reserve Corps in 1861, and served in the Army of the Potomac, where he was captured and remained in Libby Prison until 1862 He subsequently became Surgeon of Volunteers with the rank of Brevet Lieutenant Colonel He was executive officer at Depot Field Hospital, at City Point, and was mustered out at the close of the war He was a member of the Board of Examiners of Pension Surgeons and was a member of Meade Post, G A R For seven years Dr Collins served as demonstrator of surgery in the Medical Department of the University of Pennsylvania, but although an operator of good judgment and great skill, he was not a fluent speaker, so he gave up this field with reluctance and devoted himself to clinical surgery at the German Hospital, with which he was connected as consulting surgeon at the time of his death Dr Collins was a charitable, amiable and public-spirited man and had a large circle of acquaintances in the upper portion of the city He leaves a widow

Albert E Foote, M D, well known for his devotion to mineralogy and scientific studies, died at Atlanta, Georgia, on the 10th inst, where he was engaged in supervising the mineralogic exhibit of the State of Pennsylvania Dr Foote was born in Hamilton, N Y, Feb 6th, 1846 He was graduated at Ann Arbor in 1867, and afterward remained for a year as instructor in chemistry at the University of Michigan He then accepted a position at the Iowa State College as professor of chemistry and mineralogy and held the chair for five years For the last twenty years, he has resided at Philadelphia, engaged in his profession as mineralogist and in the sale of scientific and medical books He was a member of the American Association for the Advancement of Science, the American Geological Society, the New York Museum of Natural History and of the Academy of Natural Sciences of Philadelphia

Ethan Spencer, M D, formerly of Indiana, but who has been residing in this city with his son, died at the latter's residence, of old age, October 17 Dr Spencer was one of the pioneer physicians of Southern Indiana He was born in New York city in 1812, and when quite a young man removed to Ohio During his stay there he received a land grant from the government to several hundred acres, near Booneville, Ind It was here he first began to practice, later removing to Evansville where he amassed a large fortune He launched into mercantile life and lost his fortune in the panic of 1872 He again began the practice of his profession, in Evansville, where he continued actively at work until about four years ago, when he removed to this city, to live with his son His remains will be taken to Evansville, for burial

J P **Welch, M D**, formerly of Esmeraldo, New Mexico, now of St Johns, Arizona, requests that his friends be notified through the Journal of the death of his wife, which occurred September 21

S F **Rodolph, M D**, of San Francisco, October 9——E W Buck, M D, of Los Gatos, California October 5, aged 68——Michael Price, M D, of Harrisburg, Pa, October 11——J V Holson M D, of Lynchburg, Va, October 11, aged 85——John T Witherspoon, M D, of Lawrenceburg, Ky, October 12, aged 25——Timothy B Cox M D, of Frankfort, Ind, October 16, aged 79——F M Warner, M D, of New York city, October 9, aged 48——R H McFarland, M D of Orlando, Fla, October 9, aged 78——Geo W Davis, M D, of South Jacksonville, Fla, October 9, aged 74

BOOK NOTICES

Transactions of the First Pan-American Medical Congress Held in the City of Washington, D C , U S A , Sept 5, 6, 7 and 8, 1893 In two vols , pp 2,250 Washington Government *Printing Office* 1895

The contents of these two large volumes consist mostly of the papers and discussions read at the first meeting of this great Congress Abstracts of them were flashed by wire to the medical journals at the time, and from time to time for six months after the meeting of the Congress the papers themselves appeared here and there, and as a rule they enriched medical literature But there is much in the book that will be of permanent value The vast work of organization which devolved upon President Pepper, Secretary-General Reed and their colleagues, has its story partially told in the opening of the volume Those familiar with the organization will not need any glimpses behind the scenes to supply the unwritten part of that history

We can not undertake in this brief notice to write a review of these great volumes It is, however, proper that we should caution our Mexican confrères against the repetition of the mistake of too fine subdivision of the Sections General surgery, for instance, was nearly ruined by the intense desire to create new sections, in some cases, after the formation of the originl Section "Orthopedic" Surgery, "Railway" Surgery, "Military" Surgery, Gynecology and "Abdominal" Surgery, "Oral and Dental" Surgery each claimed a separate section This came near destroying the usefulness of the Section Some of them doubtless may be legitimately separated, but the limited discussion of papers that followed such minute divisions was a serious loss to the Congress So far as the papers are concerned, they are in the book under the same roof and the same man may consult all of them at his convenience, but he could not attend the different Sections in which he was interested at the time of the meeting

The importance of this initial meeting can not be overestimated when its bearing on the future of American medicine is considered, and the opportunity which was for the first time afforded of carrying into effect the wishes of the American statesmen who for all these years, since the foundation of our Republic, have wished for closer union politically commercially, professionally and socially The great learning and far-sighted wisdom of President Pepper, the industry and energy of Secretary General Reed and the devotion of the Chairmen and Secretaries of the Sections have made the Congress a creditable one from the standpoint of American medicine, and we doubt not that when the second Pan-American Congress shall be called to order in the City of Mexico, the doings of the first Congress will be taken as a model, and when the Christmas chimes of 1896 are pealing forth a welcome to the adherents of the new Congress, there will be a refrain pleasing to the ears of the constituents of the old Congress, having for its burden, "Well done, thou good and faithful servants "

A Text-Book of Practical Medicine Designed for the use of Students and Practitioners of Medicine By ALFRED L LOOMIS, M.D , LL D , Professor of Pathology and Practical Medicine in the Medical Department of the University of the City of New York, Visiting Physician to Bellevue Hospital, etc Revised and enlarged, with 207 illustrations and 1 chromo-lithographic plate Eleventh Edition, 1,184 pages Price, cloth $6, leather $7

The prefatory note by the publishers states that, "Dr Loomis was actively engaged in the revision of the present volume at the time of his last illness and had completed the greater portion of the work Since his death only such alterations and additions have been made as seemed necessary Dr G C Cokely Dr E D Fisher, and Dr Warren Coleman assisted in the preparation of the present volume "

Few text-books on the practice of medicine in this country have been more widely read than this book of Professor Loomis, and this edition will be referred to with melancholy interest as a posthumous production, although the revision was far advanced when Dr Loomis was stricken with his last illness In this edition the articles on endocarditis, cardiac fibrosis, and cardiac palpitation have been re-written Arrhythmia, tachycardia and brachycardia have been added to the list of cardiac neuroses Dysentery has been placed among the infectious diseases, acute infectious jaundice has been added, and the introduction of malarial fever has been brought in accordance with bacteriologic teachings on the subject The chapter on bacteriology, although brief, gives the essentials on the subject

In regard to antitoxin, after giving the claims of the advocates for it and those of the opposition, the subject is summarized as follows (p 739) "When good observers report so exactly opposite on the effects of antitoxin, it behooves us to administer the substance cautiously, or wait for the results of more extended observation "

It is probable that with occasional revisions this work will continue to hold its enviable position among works on the practice of medicine for many years to come

Herrick's Diagnosis A HANDBOOK OF MEDICAL DIAGNOSIS By JAMES B HERRICK, M D , Adjunct Professor of Medicine, Rush Medical College, Chicago In one handsome 12mo volume of 429 pages, with 80 engravings, and 2 colored plates Cloth, $2 50 Philadelphia Lea Brothers & Co , Publishers 1895

Although, as the author says, this book is intended chiefly for the use of students it will be found extremely useful to all grades of practitioners It is very well written, devoid of circumlocution, and shows throughout that its author is fully competent to write on the subject It may be said to be fairly a Chicago book, inasmuch as it is the outcome of the author's experience in the Cook County and Presbyterian Hospitals It must not, however, be inferred that contemporaneous literature has been ignored, on the contrary, there are few omissions of any important facts

The contents of the book, after the introduction and general considerations, include a discussion of the diagnosis of I, Infectious Diseases, II, Diseases of the Digestive System, III, Diseases of the Respiratory System, IV, Diseases of the Circulatory System, V, Constitutional Diseases, including Diseases of the Blood and Ductless Glands, VI, Diseases of the Kidneys and Genito-Urinary Organs, VII, Diseases of the Nervous System, VIII, Diseases of the Spinal Cord and its Coverings, IX, Diseases of the Brain and its Coverings, and X, Functional Nervous Diseases

It is thus seen that the scope of the work is that of a general medical diagnosis, and the author has made a fair epitome of the entire subject The work is creditable to the author and publisher from every point of view

Foster's Physiology TEXT-BOOK OF PHYSIOLOGY By MICHAEL FOSTER M D , F R S Prelector in Physiology and Fellow of Trinity College, Cambridge, England New (Sixth) American Edition with notes and additions In one handsome octavo volume of 922 pages, with 257 illustrations Cloth, $4 50, leather, $5 50 Philadelphia Lea Brothers & Co

When a book has passed to its sixth edition there is little that can be said by the reviewer which will either make or mar the book and there are few text-books on physiology better known in this country or in Europe than that of Foster In this American edition a strong effort has been made to eliminate all superfluous words and condense it as much as possible Few practitioners, either in general or special practice, keep abreast of the advances in physiology, and this is the more lamentable because of the great aid a knowledge of this branch of science is in every single medical or surgical specialty No practitioner can read a recent book on physiology without being greatly benefited by it Our knowledge of pathologic processes must bear certain and definite proportion to our knowledge of the operations of the body in health, and he who neglects the study of physiology deprives himself of one of his most certain supports The book under consideration has been carefully revised and will be found fully up to date It has almost become in this country as in England as standard as "Gray's *Anatomy*"

Taylor on Venereal Diseases The Pathology and Treatment of Venereal Diseases By Robert W Taylor, A M, M D, Clinical Professor of Venereal Diseases in the College of Physicians and Surgeons, New York In one very handsome octavo volume of 1,002 pages, with 230 engravings and 7 colored plates Cloth, $5 50, leather, $6 50 Philadelphia Lea Brothers & Co, Publishers 1895

This book is the direct successor of the well-known work of Bumstead and Taylor on venereal diseases, and gives the author's conclusions as a result of his own extensive researches and wide experience To this he has added the results of a careful sifting of the literature of the subject down to the present time The book is divided into three parts as follows Part I, forty-two chapters devoted to gonorrhea and its complications Part II, seven chapters, devoted to chancroid or soft chancre Part III, thirty-eight chapters, devoted to syphilis As an exhaustive treatise on the subject, at the same time one that is painstaking and accurate, it will be a work to which the surgeon will turn for reference whenever he has occasion to study the subject The dosage is partly in the decimal, and partly in the old system, that is, when a continental author is quoted the decimal system is used The book is in every way creditable and affords a further illustration, if any were needed, that in these days it is not necessary to buy a foreign book in order to keep fully abreast of the scientific knowledge of the day We are confident that Dr Taylor's work will meet with even more pronounced success than the former works in which he was engaged with the late Dr F J Bumstead

Surgery A Practical Treatise with Especial Reference to Treatment By C W Mansell Moullin, A M, M D, Oxon Assisted by various writers on special subjects With 623 illustrations, many of which are printed in colors, about 200 having been made from special drawings Third American Edition, revised and edited by John B Hamilton, M D, LL D, etc Cloth, pages 1,250 Philadelphia P Blakiston, Son & Co 1895

In the prefatory note to this edition, the editor states that the entire work was passed through the press in the period of six weeks—a most unusual record even in this age of many improved facilities The revision of this book was undertaken with the express purpose of striking out every superfluous word in it, leaving nothing but the solid text, and then to add whatever was new that was necessary to bring it in harmony with the latest teachings on the subject New illustrations have been added, and it may be confidently stated that the book is not surpassed by any single volume text-book of surgery on the market for the use of general practitioners and students The illustrations are from the latest text-books, and those examining the work will find that omissions are very few

Gray on Nervous and Mental Diseases A Treatise on Nervous and Mental Diseases By Landon Carter Gray, M D, Professor of Diseases of the Mind and Nervous System in the New York Polyclinic New (Second) Edition, In one very handsome octavo volume of 728 pages, with 172 engravings and 3 colored plates Cloth, $4 75, leather, $5 75 Philadelphia Lea Brothers & Co, Publishers 1895

It is a pleasure to write a notice of a book of this character The well-known literary attainments of the author, the fine paper and beautiful text, the elegant illustrations, many of which are in colors, make it easy to understand why this book has passed to a second edition Five new chapters have been added in this edition, namely Dementia, Dementia Paranoides, Confusional Insanity, Delirium, and Massage "The word treatment," says the author, "has been construed in the broadest sense to include not only medicinal and non-medicinal agents, but also those hygienic and dietetic measures which are often the physician's best reliance"

In regard to massage, the author says "In cases of individuals who, for various causes, are unable to use their muscles, or in others who are necessarily confined to their room or to bed, massage is an invaluable therapeutic agent The great difficulty about it is there are few persons expert in the giving of it For several years I almost abandoned its use for this reason, and it has only been since I have kept in my employ a masseur that I have been able to rely upon it In some instances I have known physicians instructing some nurse so as to obtain very creditable results"

This edition will be found carefully revised and brought up to date with the exception of the prescription writing, in which the old system of dosage is still adhered to The book will be found as interesting as its predecessor and retaining all of the characteristics which made the first edition popular

Synopsis of a Course of Lectures on the Anatomy, Physiology and Histo-Chemistry of the Nervous System By John A Benson, M D Chicago E H Colegrove & Co 1895

This is a complete syllabus of a course of lectures on its titular subject, in which the author's experience as a physiologist and his practical ability as a teacher are well displayed We commend the syllabus to those who are interested in the subject

Case Recorder in General Medicine and Gynecology, for the Use of Physicians, Students, Dispensaries and Hospitals By S B Lyon, M D Milwaukee A L Koursh & Co 1895

We have examined this clinical record with some care, and have to say that for minuteness and completeness we have not seen its equal Every possible symptom has a place wherein it can be recorded, and those who desire to keep accurate records of their patients will find this a most useful record book

Bernd's Physicians' Register St Louis, Mo Henry Bernd & Co

This register is admirably adapted for the keeping of accounts with patients, and doctors who are said in some quarters to be poor business men, can be made good ones, so far as the keeping of their accounts is concerned, if they will take pains to provide themselves with this admirable record

MISCELLANY

Septicemia —The latest treatment for general septicemia is hypodermic injections of creasote The creasote is mixed with equal parts of camphorated oil, and 20 minims of the solution are injected three times a day —*Journal of Practical Medicine*, October, 1895

Illinois State Medical Society —The Transactions of the Illinois State Medical Society were sent to the members last week by express Those who are in arrears may receive the volume by at once remitting their annual dues to the Treasurer, George N Kreider, M D, Springfield, Ill

Medical Advertisements —In its issue of October 15, *The Medical Fortnightly* gives notice that it has adopted the rule that it will not accept advertisements of medical preparations, the proprietors of which do not give a formula containing the official or chemic name and quantity of each composing ingredient to be inserted as a part of the advertisement

Hospitals in Jerusalem and Damascus —An English medical missionary, Dr Masterman, at present residing at Jerusalem, reports that progress is being made with the erection of the new mission hospital at Jerusalem The hospital will have beds for forty patients, and will also have a dispensary It is outside the city, on the freehold property of one of the London societies known as the "Sanitarium," about three-quarters of a mile from Jaffa Gate A hospital at Damascus will shortly be opened Dr Masterman will take charge of the work for a year, at the expiration of which time a permanent medical appointment will probably be made

Parvin on Boerhaave —In the *Medical and Surgical Reporter* is quoted a letter from Dr Parvin, narrating his medico vacational tour through Holland He found much to interest him in the Dutch cities, inclusive of Leyden Of that city he writes " Leyden interested me chiefly because there Boerhaave lived and taught It seems to me that Medicine has given the world few greater, and none better than he His monument, with its brief inscription, scarcely more than date of birth and date of death, reveals a man of commanding appearance, and of large head, with prominent fore head "

Divorce Denied —A cruel statement is telegraphed from Kansas City, to the effect that one of the 'New Women" who practices medicine in that town, was refused a divorce by an unfeeling judge, who asserted that the reasons urged by her were insufficient to warrant the issuance of a dêcree It seems that the bill of the plaintiff alleged that the wicked husband refused to cook the meals while she was engaged in daily practice of her profession, and that he would not even help her prepare the meals, but 'laid around" while she was thus engaged The complainant's tale of woe is probably unique, and deserves more mention than it is likely to receive

An Old Garbage Dumping Ground —Riker's Island, near New York city, was for a time used as a dump for garbage This use was perforce abandoned on account of the villainous odors caused thereby The subsequent story regarding the place is interesting, as showing how difficult it is to throw anything away One of the New York papers tells that story as follows " Riker's Island was a barren aggregation of rocks, not too far from New York to be reached and not near enough to be noticed. It seemed a handy spot to dump garbage and garbage accordingly was dumped on it The garbage smelled bad, so earth was spread on top of the garbage Then it was left alone It began to smell bad again about a month ago, and its neighbors complained Then an explorer was fitted out to investigate it He came back with a great load of vegetables, and the surprising tale that Riker's Island had dreamed it was a kitchen garden, and that the dream had come true The vegetable seeds in the garbage had grown up through the top-dressing of soil, and behold profusion itself—melons, pumpkins, squashes, tomatoes, and other fruits of the earth glowing and ripening in their seasons, with no one to hinder and no one to glean "

Progress of Dentistry in Japanese Cities —An eminent correspondent of the New York *Herald*, having been inquired of regarding the field for American dentists in Japan, has written a letter discouraging in its tenor, that is abstracted in the following " Japan is full of dentistry, and the native dentists are flourishing There is a dental department connected with the medical branch of the Tokyo Imperial University There are fifty six practicing dentists in Tokyo, and each office has from four to twelve students These young men assist at all operations One works the drill, another handles the syringe, another passes up the gold foil, and the division of labor is quite scientific Many of the Japanese dentists are graduates of firstclass American colleges They are quite skillful The Japanese are fond of having their front teeth filled with gold They frequently have holes bored in good teeth in order to have them plugged and polished They think that the exhibit of gold fillings in front teeth suggests advanced civilization San Francisco turns out about one hundred young Japanese dentists a year There is a factory in Tokyo which turns out all manner of dental instruments and dental goods, including engines and porcelain teeth "

Distribution of Population in New York and Philadelphia, London and Paris —The New York *Sun* contains some census comparisons that are of interest to medical readers, showing how the people of certain large cities in this country and Europe are housed New York has 115,000 houses, averaging 18 residents to each London, the greatest accumulation of inhabitants in the world, has 600,000 houses, or 7 residents in each on the average London has increased in this respect very rapidly, for at the beginning of the present century the number of houses was only 130,000, little more than New York has at the present time The population of London at that time was 960,000 It is now 4,200,000 So it has increased nearly fivefold, but the number of houses has not increased in as large a ratio Paris has 90,000 houses At the close of the Franco Prussion war it had 70 000 At the close of the Napoleonic wars it had 28 000 The area of the city has been extended meanwhile The average number of residents in a house in Paris is 25, which is about 50 per cent greater than in New York In all computations of city population by houses, Philadelphia ranks as a shining example of a big town which has plenty of "elbow room" to expand in Philadelphia, with a population in excess of 1,000,000 has 137,000 houses It is less densely populated than London, but not much less so

Pharmacy Law of Oklahoma —The pharmacy law of the Territory of Oklahoma has been amended so that it is in part as follows, the old provisions on the same subject being inclosed in quotation marks "Any person in order to be qualified [as a pharmacist], shall be 21 years old, and shall have passed a satisfactory examination before the board of pharmacy of the Territory of Oklahoma," or shall produce a certificate of pharmacy, regularly issued to him under the authority of any State or Territory, and prove that he is in good standing in that State or Territory, 'or shall be a graduate of pharmacy, as hereinafter provided " *Provided, however*, That nothing in this chapter shall be construed to prevent any physician duly authorized to practice medicine in this Territory from keeping drugs for use in his profession, and compounding his own prescriptions Pharmacists having passed the examination provided by the board of pharmaceutic examiners, and being duly registered, as provided by law, it is also enacted, are to be exempt from all jury service

Milk Typhoid at Simla in Northern India —The *Sanitary Record* has an item referring to the outbreak of fever at Simla, a summer resort for Indian officers and Europeans doing business in and around Bombay and other cities It says "Several cases of typhoid fever which have occurred lately are attributed by Dr Cunningham to the sale of impure milk brought in from villages in the surrounding native States Dr Cunningham has addressed a very strong remonstrance to the Municipal Committee on the subject, and urges the necessity of immediate action being taken "

Congenital Unilateral Absence of the Kidney —Ballowitz (*Virchow's Archiv*, Bd 141, Heft 2), makes a literary and statistic study of 210 cases of congenital absence of one kidney and adds three cases of his own

The combined statistics of Brown (*Journal of Anat and Phys*, xxviii, 1894) Morris (*Brit Med Journal*, 1885, vol i, p 814), Sargalli (*Reale Instituto Lombardo Rendicont*, Ser ii, vol ix, 1876), Mensies (*Jour Anat and Phys*, vol xxi, 1887), and Rootes (*Lancet*, 1866, vol ii, p 251), show one kidney to have been absent eleven times in 27,806 post-mortem examinations Of the 213 cases of single kidney collected by Ballowitz the defect occurred one hundred and seventeen times on the left side and eighty eight times on the right In 112 male bodies the kidney was absent seventy times on the right side and forty-two times on the left In sixty-five female bodies the left kidney was absent thirty one times the right thirty-four times Consequently the figures show that single kidney is found nearly twice as often in male as in female bodies, and that in the male bodies the left kidney is much more frequently absent than the right When a kidney is absent the corresponding renal vessels are practically always also absent The ureter was also absent except in fifteen cases The shape of the single kidney is generally

Health was called on the 15th inst by the Chairman, Dr Samuel C Busey Important business was discussed relating to sewers, water supply, milk supply and inspectors, and the annual report of the Committee

Medical Society of the District —At the meeting of the Society held on the 16th inst, Dr Bovee presented three specimens of fibroids recently removed Dr B A Storck read a paper on puerperal septicemia and antisepsis Both subjects brought out a full and interesting discussion The following resolution touching the question of typhoid fever in the District was adopted

"*Resolved*, That the Medical Society commends the efforts of the Health Office to ascertain the number of cases of typhoid fever in the District, and that the corresponding secretary be instructed to send a circular letter to every member of this body, urging him to report at once to the Health Office the number of cases of typhoid fever he has treated since July 1, 1895, and if he has not had any cases to report that fact "

Washington Obstetrical and Gynecological Society — The two hundred and thirty-third meeting of the Society was held on the 8th inst at the Arlington Hotel This was the annual business meeting for the election of officers and committees, and resulted as follows President, Dr Geo Byrd Harrison, Vice-Presidents, Dr Geo N Acker and S S Adams, Secretary, Dr G W Cook, Treasurer, Dr John Van Rensselaer, Corresponding Secretary, Dr W S Bowen Business Committee, Drs Winter, Nash and Bowen Admission Committee, Drs Spriggs, Deale and Cuthbert Publishing Committee, Drs Deale, Spriggs and Cook The Society will entertain the Southern Gynecological Society at its meeting here in November, and appointed a committee to make arrangements At the close of the meeting the members sat down to one of the finest banquets ever served in the "Arlington "

Microscopical Society —The annual meeting of the Society was held on the 8th inst The following officers were elected President, Dr Marshall, Vice-President, Dr Gibbs, Treasurer, Dr Bullock, Secretary, Mr Mooers A banquet will be held next month

Medical Society of the District —At the meeting held on the 9th inst, Dr Shands read a very interesting paper entitled, "The Importance of Early Mechanical Treatment in Anterior Polio myelitis" A free discussion followed Dr J T Johnson presented cases and specimens, viz, concretion from an appendicitis, extra uterine pregnancy, ovarian cysts and two hysterectomies

Central Dispensary and Emergency Hospital —The regular monthly meeting of the Board of Directors of the hospital was held on the 11th inst The following appointments as assistants, were made by the staff and approved by the Board Drs H S Goodall, Wallace Johnson, Ada R Thomas, Rupert Norton, Walter A Wells, E E Morse and Maxwell H Allen

Recommendations of Excise Board —The excise law of the District does not provide protection against the adulterations of liquors by dealers or others, hence the Excise Board submitted the following to the Commissioners of the District, with the request that they urge its passage by Congress

"Every person so licensed, or any other person who shall intentionally or otherwise sell or give away or direct or permit any person or persons in his employ to sell or give away, malt, spirituous and vinous liquors which shall be adulterated with strychnin, strontia, sugar of lead or any substance which is poisonous or injurious to health, shall forfeit and pay the sum of $300 for every such offense, and in case of non-payment of such fine shall be imprisoned in the jail of the District of Columbia for a period of time not exceeding six months or till the same is paid An analysis made by a practical chemist shall be deemed competent testimony under the provisions of this section "

The Post Graduate School of Medicine of the District of Columbia —The following named gentlemen met on the 10th inst at the office of Dr H L E Johnson, and organized the Post Graduate School of Medicine of the District of Columbia Dr H L E Johnson, E L Tompkins, W W Johnston, Samuel C Busey, J Foster Scott, H D Fry, S S Adams, J Ford Thompson, T E McArdle, Chas W Richardson, James Kerr, G N Acker, W H Wilmer, M F Cuthbert, E M Parker, G Wythe Cook and George Byrd Harrison The meeting was called to order by Dr Johnson, and Dr Samuel C Busey was unanimously elected President Upon motion the President appointed a committee to draft a constitution and by-laws The meeting adjourned pending the report of the committee

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THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S Army, from October 10, 1895 to October 17 1895

Major B F Pope, Surgeon U S A, is granted leave of absence for thirty days

Capt Julian M Cabell, Asst Surgeon, ordered to Davids Island, N Y, for duty in lieu of reporting to the Surgeon General for duty

Major Henry M Cronkhite Surgeon, having been found incapacitated for active service is retired to date from Sept 17 1895

First Lieut Isaac P Ware, Asst Surgeon, is granted leave of absence for one month, on surgeon's certificate of disability, with permission to leave the limits of the Department

First Lieut John S Kulp, Asst Surgeon U S A, is granted leave of absence for one month, to take effect about Nov 10, 1895, with permission to apply to the Adjutant General of the Army for an extension of one month

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending October 19 1895

Medical Directors G S Beardsley and P S Wales, ordered to duty as members of the naval examining and retiring board

P A Surgeon J S Sayre, ordered to treatment at the Philadelphia Naval Hospital

P A Surgeon C H T Lowndes, detached from the naval hospital at Mare Island and ordered to the Marine Rendezvous, San Francisco, Cal, and in attendance on officers in that city

P A Surgeon C J Decker detached from the Marine Rendezvous and special duty in San Francisco, and ordered to the naval hospital at Mare Island

APPOINTMENT

J C Rosenblueth appointed Asst Surgeon in the Navy, October 14

Marine Hospital Changes Official list of changes of station and duties of Medical Officers of the U S Marine Hospital Service, for the fifteen days ended October 15, 1895

Surgeon R D Murray, granted leave of absence for thirty days, Oct 4, 1895

Surgeon Fairfax Irwin, granted leave of absence for thirty days, Oct 4, 1895

P A Surgeon C E Banks, detailed as chairman of board for physical examination of officer and candidates, revenue cutter service, Oct 2 and 8, 1895

P A Surgeon S D Brooks when relieved from temporary duty at St Louis Mo to rejoin station at Chicago, Ill, Oct 3, 1895

P A Surgeon G M Magruder, upon completion of duties at Camp Jenner, Eagle Pass, Texas, to rejoin station at Galveston, Texas, Oct 11, 1895

P A Surgeon L L Williams, to proceed from Charleston, S C, to Waynesville, Ga, as inspector, Oct 2, 1895

P A Surgeon J O Cobb, to proceed to Victoria B C, and Vancouver, Wash, on special temporary duty Oct 12, 1895

P A Surgeon B W Brown, detailed as recorder of board for physical examination of officer and candidates, revenue cutter service Oct 2 and 8, 1895

P A Surgeon E R Houghton granted leave of absence for thirty days from date of being relieved from duty at Vineyard Haven, Mass, Oct 5, 1895

Asst Surgeon Emil Prochazka, when relieved from temporary duty at Charleston, S C, to proceed to Cairo, Ill, for temporary duty, Oct 12 1895

Asst Surgeon A R Thomas, relieved from temporary duty at New Orleans La and directed to rejoin station at St Louis Mo Oct 3 1895

Asst Surgeon J B Greene, relieved from temporary duty at Wilmington N C, and directed to proceed to Vineyard Haven, Mass, and assume temporary command of the Service, Oct 2, 1895

RESIGNATION

P A Surgeon E R Houghton, resignation accepted, to take effect upon expiration of leave of absence, Oct 5, 1895

LETTERS RECEIVED

American Express Co, Chicago, Ill, Ayer, W W & Son, Philadelphia Pa
Bach, J A, Milwaukee, Wis
Clark, Robert Co, Cincinnati Ohio, Carpenter, J T, Philadelphia, Pa Chaddock, C G, St Louis, Mo
Hobday, W A, Chicago, Ill
Johnson H L E, Washington D C
Keiper, Geo F, La Fayette, Ind
Lang J M Chicago, Ill
Moore, W H, Brockport, N Y
Parker, W W, Richmond, Va
Smart, Chas Washington D C
Woodbury Frank, Philadelphia, Pa, Walker, W H, Oakland, Texas
Young, A G, Augusta, Me

The Journal of the
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ADDRESSES

INTRODUCTORY ADDRESS

Delivered at the Chicago Medical College

BY EDMUND ANDREWS, A M, M D, LL D
CHICAGO

DO NOT LET YOUR LATIN SPOIL YOUR ENGLISH

You have all prepared yourselves with some knowledge of Latin and Greek to assist your medical studies Many of you have received degrees from colleges and universities such as Bachelor of Arts, Bachelor of Sciences, Master of Arts, etc, given as honors for your hard study in these and other branches Your knowledge of Latin and Greek will immensely facilitate your understanding and memory of technical terms, as well as promote your skill in writing prescriptions and will prove a valuable element in your mental culture To this end and to this extent, you may well be glad of your knowledge of the classic languages Connected with this knowledge, however, there is a peril besetting the development of your literary style It is the danger of allowing Latin and Greek derivatives to crowd unnecessarily into your speech and writings, corrupting the purity of your English, and giving to your productions an air of stiffness and pomposity

It is true that many organs in the human body, and many physiologic processes have no English names, and we are compelled to make use of a certain number of technical terms borrowed from the Latin and Greek, but words of this group are long and generally harsh in sound, and they work roughly and badly in the construction of English sentences They should be used therefore as sparingly as possible They do not harmonize well with Anglo Saxon speech

High literary authorities condemn the needless loading of sentences with these half foreign words If a new word has to be composed to express a new and unnamed fact, make it as short and as smooth in sound as possible, remembering that pure, simple, crystalline English constitutes the best style Do not spoil it by loading it down with pompous polysyllables of Latin and Greek origin

That master of good style, James Russell Lowell, laments our inferiority to English writers in this respect He says "It has long seemed to me that the great vice of American writing and speaking is a studied want of simplicity Very few American writers wield their native language with the directness, force and precision that are common as the day in the mother country While the schoolmaster has been busy 'starching' our language and smoothing it flat, the newspaper reporter has been doing even more harm by stretching and swelling it to suit his occasions" Such is Lowell's opinion

Short Anglo Saxon words of common use are the best, wherever they will express the meaning It is this choice of short words, resulting in a condensed style of singular force, which gives the writings of Shakespeare and the English translation of the Bible much of their tremendous power

It is amusing and yet vexatious to see a worthy medical gentleman whose ordinary conversation is in a simple and good style, suddenly swell up when he writes a medical article He changes his whole dialect and fills his pages with a jangle of harsh technical terms, not one-third of which are necessary to express his meaning He tries to be solemn and imposing For instance, a physician recently devised a new instrument, and wrote it up for a medical journal under this title, "A New Apparatus for the Armamentarium of the Clinician," by which heading he doubtless hopes to make the fame of his invention, "go thundering down the ages" as Guiteau said

Another writer wanted to say that cancer is an unnatural growth of epithelium He took a big breath and spouted the following "Carcinoma arises from any subepithelial proliferation by which epithelial cells are isolated and made to grow abnormally" Now, then, you know all about cancer

A writer on insanity illuminates the subject as follows "The prodromic delirium is a quasi-paranoiac psychosis in a degenerate subject A psychosis of exhaustion, being practically a condition of syncope"

The following is an effort to say that certain microbes produce the poison of erysipelas "The streptococcus erysipalatosus proliferating in the interspaces of the connective tissue is the etiologic factor in the secretion of the erysipelatous toxins"

A large cancer of the liver was found at a postmortem examination and reported about as follows "A colossal carcinomatous degeneration of the hepatic mechanism"

Still, the man of big swelling words is not always up in the clouds If called to a case of accident, he examines the injury, and may inform the family in quite a simple and dignified manner that their father was thrown sidewise from his carriage breaking his leg and putting his ankle out of joint, but if he writes out the case for his medical journal, he gets up straightway on his stilts and says "The patient was projected transversely from his vehicle, fracturing the tibia and fibula and luxating the tibio-tarsal articulation"

Your man of solemn speech is peculiar He does not keep a set of instruments—not he—he has an armamentarium His catheters never have a hole or an eye in them, but always a fenestrum In gunshot injuries, a bullet never makes a hole in his patient, but only a perforation He does not disinfect his armamentarium by boiling, but by submerging it in water elevated to the temperature of ebullition He never distinguishes one disease from another, but always differentiates or diagnosticates it His patient's mouth is an oral cavity His jaw is a maxilla His brain is a cerebrum, his hip joint is a coxo-femoral articulation If his eyelids are adherent, it is a case of ankylo-symblepharon If he discovers wrinkles on the skin, they are corrugations or else rugosities He never sees any bleeding, but only hemorrhage, or sanguineous effusion He does not examine a limb by touch or by handling—he palpates or manipulates it If he finds it hopelessly diseased he does not cut it off—that is undignified He gets out his armamentarium and amputates it

I like the sturdy contempt of our English brethren for all mere word pomp and prudishness In London they still call their most fashionable avenue for horseback riding by its ancient name of "Rotten Row " In Chicago we would long ago have changed it to "Grand Washingtonian Cavalry Boulevard "

The surgeon over there generally shows the same solid traits as their other writers, and you will do well to study the writings of the eminent Frederick Treves of London, as a model in this respect

A good British surgeon has good culture and good common sense combined He takes his trocar and taps a dropsy, for instance Not so the American He blushes to hear such plain speech from his British brother, but he takes his armamentarium and goes out straightway and performs paracentesis abdominis Still the pompousness is not all on one side of the ocean, and it is refreshing to see an occasional touch of it beyond the seas, just to show that we are not the only sinners in this respect

A celebrated British surgeon explains his opinions as follows "Septic peritonitis, save where definable from evidence wholly extrinsic to the condition of the peritoneum, is an etiologic entity which exists only in the mind of the pathologic metaphysician " Nothing worse than this was ever written on our side of the water

Two of the stilted phrases which have recently gotten into vogue are etiologic factor and etiologic entity They are both snobbish substitutes for the plain English word, cause

The Greek word 'αιτια, means a cause 'Αιτιολογια, from which we derive etiology, is compounded of 'αιτια, cause, and λογος, which taken in composition means a study or science The whole means the science of causes 'Αιτιολογιχος, from which we derive etiologic, means a person skilled in the study of causes, or a thing pertaining to the science of causation Factor is a Latin word, lugged in improperly, to mix with the Greek It is of the masculine gender and signifies a man doing or producing something As an English word it also has a mathematical use Putting the whole jumble in order, an etiologic factor ought to mean some person or thing skilled in, or related to the science of causes, or, in other words, a causative-science maker, or a maker of something or of somebody pertaining to the science of causation In the name of all the gods of Greece and Rome, what idea are these men trying to express? If they mean cause why don't they say cause and be done with it? Language is not manufactured, it grows The speakers of each tongue have evolved it through the ages by the process of trying thousands of new words, and instinctively rejecting such as lack the music and fitness required for speaking purposes They have tried all ways of molding words into sentences until the perfected language, like mosaic work in the hands of some great master, has become fitted to express all the high and inspiring thoughts of men

Such a language is the pure English of to-day Derived mainly from the Anglo-Saxon, its words are chiefly monosyllables, but they are all gems, and all polished and fitted to each other by ages of use Whoever is master of it, is an artist in the highest sense Whoever thrusts into it a rough, harsh, polysyllabic word, crudely quarried out of a Greek or Latin dictionary, is like a fool who drives a pickaxe through a magnificent mosaic picture, and then plugs the hole with a brickbat

The author who dumps upon us a book full of long and ragged new words, merely to display his knowledge of ancient languages, shows his ignorance of English, and brands himself as a bungler and a literary blockhead

As I said before, use newly coined words sparingly, but when they become necessary, select them as carefully as you would choose jewels for your bride Fit them, polish them, and make them suitable for flashing forth the best thoughts of human souls

It is curious that the half-educated man who knows little or nothing of the classics, always dotes most on these big phrases, and is ever foremost in piling up the abominable rubbish-heap of long, scraggy words which deform medical literature, and render it a melancholy spectacle to gods and men

The evil is intolerable, and in your day a reform will be demanded Bear in mind that your lives are to be spent in an atmosphere of higher culture than that of your predecessors

The finer culture of the future will demand a reorganization of our word system, and will cast to the moles and the bats very much worthless material which is now the pride of the ignoramuses who invented it Prepare yourselves therefore for the change, and do your best to make the language of future science more bright, pure and simple, and more fit for the use of all who wish to couple clearness of thought with beauty of expression

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SOCIOLOGY AND CRIMINOLOGY

Address at opening of Department of Sociology and Criminology, at the Medico Legal Congress

BY CLARK BELL, ESQ

NEW YORK

That public interest in sociologic studies is on the increase in our day, can not be questioned We may recognize its hold on popular thought, by remarking that in the present Congress more papers are contributed to the Department of Sociology and Criminology, than to any other This is not in my opinion the result of chance, but is due to the increasing interest manifested in the world of thought in this domain of scientific investigation

Especial stimulus has been given to the study of criminology by Lombroso's writings, and others of his school

Enricco Ferri has touched it with his brilliant lance Herman Kornfeld, Morris Benedikt, Kraft Ebbing, Morel, Le Grand du Saulle, Brierre du Bois Mont and Prosper Depine on the continent, Havelock Ellis, W W Ireland, Pritchard, Thomson, Dr Nicholson and W Douglass Morrison in Great Britain, and many other writers of distinction have illumined its importance The International Congress of Penal Law, attracted twice, many great names from all the world, to this subject

It is not crime alone that we study now, with method of punishment, sentences, prisons and their management, including discipline and corporal punishment in prisons, all the offenses and the modifications in penal statutes, but we are coming to study more, the criminal himself, his characteristics, degeneracy, heredity, and above all environment

Are punishments for crime, as defined in our penal statutes, really deterrent? Has the State the moral right to inflict punishment in any retaliatory spirit as is now oftentimes the basis of penal statutes? and if experience demonstrates that excessive or prescribed forms of punishment do not act in fact as a deterrent in diminishing crime, should we not consider with greater care what modifications are proper to reach the end desired, beside the protection of society, a perceptible decrease in the volume of crime?

The lesson of the repeal of long list of capital offenses in Great Britain since the day when sheep stealing was a capital offense, must not be lost Severity of punishment does not appear to operate as a deterrent It seems to be true that the fear of the scaffold rarely deters the murderer

Crime seems in the ocean of humanity, to be the sum of social causes, which, like great rivers, flow toward and empty into it Its Amazon is, no doubt, alcoholic stimulants which more than all other causes combined, constitute the inevitable, terrible, irresistible scourge of the race In its currents, tides and eddies, are insanity, epilepsy and physical degeneracy, not always in the parent, but more certain in the offspring Its movements run like the blood of man into the veins and lives of children's children, with a taint as terrible as that of leprosy or syphilis

The burdens to the State for the care of the insane in the rural districts or counties, notably in an agricultural county like Yates, where I reside in the summer, in this year of grace is actually greater than the cost of the schools, and almost equal to the entire other expense of the State government including the canals

When will we have the courage to look this awful question squarely in the face, and decrease the volume of crime, not by penal laws for the punishment of the criminal (often the victim of his birth and environment) but by striking at and repressing the cause

The recognized defects in our penal laws, especially in Great Britain, the United States and many of the continental states may be summarized as follows

1 The principle of equality of sentences, as to their duration as now existing, is erroneous and vicious in its fundamental principles

2 It is wrong to make arbitrary punishments for the same offenses against all offenders alike

3 Criminal laws must be so framed as to meet the social conditions of the criminal classes

Laws based upon the social conditions of men in the ordinary walks of life, fail They should rather be aimed at the social life and condition of the criminal classes I quite agree with W Douglass Morrison of the Wadsworth Prison in England, when he asserts that "The criminal is a product of anomalous biologic conditions, as well as adverse circumstances "

4 Some plan should be devised in the administration of punishments to offenders, under which the principle of determinate sentences should be applicable to the individual condition of the offender For example (*a*), the same offense should not receive the same punishment in all cases, as for example, when committed by an adult, or a child or a youthful offender, (*b*), the difference in punishment for the same offense by a man and by a woman, should be rather to *the* man and *the* woman

5 We must consider whether Bentham was right in insisting that we should, in adjusting our methods of punishment, look as much to the nature and condition of the offender as to the nature of the offense Much of the failure of our present system as a protection to society is unquestionably due to our ignoring this fundamental law in our present penal statutes, and punishment of criminals

Mr Morrison strikes at an important principle, that we should place our prisons on the same basis as the penal laws That prisons should reach the causes and conditions which produce the criminal, and the penal statutes be placed on the same plane

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ORIGINAL ARTICLES

PROGNOSTIC SIGNIFICANCE OF ALBUMINURIC RETINITIS

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md , May 7-10 1895

BY E OLIVER BELT, M D
PROFESSOR OF OPHTHALMOLOGY AND OTOLOGY, HOWARD UNIVERSITY, AND OPHTHALMIC AND AURAL SURGEON TO FREEDMAN'S HOSPITAL
WASHINGTON D C

It seems to be generally admitted that the retinitis following scarlet fever and pregnancy is not of special prognostic significance as to vision or mortality, for under careful treatment recovery of both vision and health are not unusual in these cases Therefore in this paper, such cases have been excluded, as the prognosis is altogether different and unfavorable in the retinitis of chronic Bright's disease Though improvement of vision very frequently occurs in albuminuric retinitis, it is of minor importance in comparison with the life of the patient, and the main point which I wish to determine is the average duration of life after the appearance of retinitis from renal disease The statistics heretofore published upon this subject deal mostly with hospital cases, in which the duration of life rarely exceeds one year Occasionally we see reported a case in private practice which has survived five, ten, and even fifteen years (Noyes mentions one of ten years, and Webster reports the case of a minister who survived seventeen years) This led me to think that we might be able to give a more hopeful prognosis in cases which could receive good medical attention with the proper hygienic surroundings, and I decided to try and find, whether or not the average duration of life was greater among private than among hospital cases With this end in view, a few weeks ago I requested quite a number of ophthalmologists throughout the country to report the cases which had occurred in their private practice to me The time allowed was too short for many to look over their records, and many had not kept trace of the patients after referring them back to the family physician, but enough cases were reported to show that the duration of life is longer among private patients, and that renal affection is undoubtedly influenced by hygienic sur-

DIED WITHIN TIME DESIGNATED BELOW

Physician	Total cases	3 mos	6 mos	12 mos	18 mos	2 yrs	Over 2 yrs	Living after first Observation
J H Thompson, Kansas City, Mo	15			13				
W V Marmion Washington D C	10				10			One 7 mos, one 2 mos.
Hiram Woods, Baltimore Md	1	1						
Wm Cheatham, Louisville, Ky	9	1	2	2	2	2		One 6 mos, one 5 mos. one 18 mos
Geo T Stevens, New York	1						One 11 yrs	
S C Ayres Cincinnati Ohio	2	1	1					
G H Good, Cincinnati, Ohio	1					1		
J A Spalding, Portland, Me	6	1	2	1		2		
H B Young Burlington Iowa	3	2					One 5 yrs	
David Coggin, Salem, Mass	30		28					
Richmond Lennox Brooklyn, N Y	2	1	1					
P A Callan, New York	1						One 9 yrs	
W F Mittendorf, New York	6	3	1		1	1		
E C Rivers, Denver Colo	3			2				One 8 mos
R J McKay, Wilmington, Del	11		5	3	2		One 8½ yrs	
E Oliver Belt, Washington D C	2		2					
Total	106	10	42	21	15	6	6	6

Deducting the six cases not traced 2 years leaves the following total 100 cases 3 months 10 per cent 6 months, 42 per cent 12 months 21 per cent , 18 months, 15 per cent , 2 years, 6 per cent over 2 years, 6 per cent Died within 1 year, 73 per cent within 2 years, 91 per cent

PRIVATE CASES

Physician	Total cases	3 mos	6 mos	12 mos	18 mos	2 yrs	Over 2 yrs	Living after first Observation
G Hartridge	5	1	1	3				
James Anderson	8	2	1					
Simeon Snell	8	3	3	1	1			
Possauer and Haab	39			19		4	Four 3 years two 8 years, ten 2 to 5 yrs	
E Oliver Belt	100	10	42	21	15	6		Ten 2 to 5 years
Total	155	16	47	44	16	10	22	

Died within 1 year, 62 per cent , within 2 years 85 per cent , over 2 years, 14 per cent

HOSPITAL CASES

Physician	Total cases	3 mos	6 mos	12 mos	18 mos	2 yrs	Over 2 yrs	Living after first Observation
Miles Miles	45	26	11	5	3			
Possauer and Haab	33			21		3	5	Three over 2 yrs 1 less
Total	78	26	11	29	3	3	5	

Died within 1 year, 85 per cent within two years, 93 per cent , over 2 years, 6 per cent

MIXED CASES

Physician	Total cases	3 mos	6 mos	12 mos	18 mos	2 yrs	Over 2 yrs	Living after first Observation
C S Bull	103	16	14	27	7	11	Six 3 years four 4 years one 6 years one 7 years	Fourteen 6 mos Two 1 year
	Deduct	ing 16	cases n	ot trac	ed 2 yrs	leaves		
	87	16	14	27	7	11	12	
Dr Gruening	100					100		
Total	187	16	14	27	7	111	12	

Died within 1 year, 65 per cent , within two years, 93 per cent , over 2 years, 6 per cent

Physician	Total cases	3 mos	6 mos	12 mos	18 mos	2 yrs	Over 2 yrs	Living after first Observation
Private	155	16	47	44	16	10	22	
Hospital	78	26	11	29	3	3	5	
Mixed	187	16	14	27	7	111	12	
Total	419	58	72	100	26	124	39	

Died within 1 year, 72 per cent , within 2 years, 90 per cent , over 2 years, 9 per cent

roundings However, the number of cases surviving two years was disappointingly low, and the consensus of opinion, as shown from the following extracts from letters received, seems to be that nearly all prove fatal in less than two years

Dr G E de Schweinitz, of Philadelphia, says "So far as I know, there is no case in my private practice that has lived longer than two years after the development of the retinitis "

Dr J L Thompson, of Indianapolis, says "Have had between fifty and one hundred cases scattered through my books in a private practice of twenty-four years Several of my patients have died within thirty days, while others have lived two years Many more died within six months after its first manifestation in the eyes than lived after that period "

Dr Walter B Johnson, Paterson, N J, says "In many cases the retinitis was the first indication of kidney disease, which after discovery almost invariably progressed very rapidly "

Dr Peter D Keyser, of Philadelphia, says "That the length of life depends upon the retinal appearance at the time of the first examination In well marked cases, I should say an average of twelve months, if the patient is under good medical care I have had some cases to run two years, others only three months "

Dr L A W Alleman, Brooklyn, N Y, says "Save in some cases due to pregnancy, I have never seen a pure case of albuminuric retinitis last over a few months, from the time it has come under my observation "

Dr Samuel D Risley, Philadelphia, says "My impression is that after the appearance of eye symptoms, nephritis is rapidly fatal I recall cases of death occurring within a few weeks, and can not recall one which did not prove fatal inside of two years, whether associated with pregnancy or not "

Dr G C Savage, Nashville, Tenn, says "My recollection of these cases is that they died within two months, and I do not remember that a single case lived longer than five months "

Dr Charles W Kollock, Charleston, S C, says: "In no case in my practice has any such patient lived out the year "

Dr Peter A Callan, New York, says "My impression is that the great majority die under two years after the onset of the retinal changes, but there are exceptional cases, one of which has now lived nine years since I first made out that she had the kidney trouble with the eye complication ”

Dr George T Stevens, New York, says “I observe that some of our colleagues think that a fatal termination is to be expected within a few months after the discovery of the albuminuric retinitis I can recall to mind quite a number of people who have survived several years Mrs K survived more than eleven years after I found well-marked retinitis albuminuria This is not, I think, a specially exceptional case ”

Dr David Coggin, Salem, Mass , says “Of thirty fatal cases, I remember but two who lived over six months ”

Dr C S Turnbull, Philadelphia, says “My experience has in a general way led me to think that the time is most variable, depending greatly upon the many and varied forms of renal disease in different individuals ”

From all the statistics I have been able to find, we get the following results Cases in private practice 155, of these 62 per cent died within one year, 85 per cent in two years, and 14 per cent lived more than two years

Hospital cases, 77 of these, 85 per cent died within one year, 93 per cent in two years, and 6 per cent lived more than two years

Mixed cases, 187 of these, 65 per cent died within one year, 93 per cent within two years, and 6 per cent lived more than two years

Total number of cases, 419, of these, 72 per cent died within one year, 90 per cent within two years, and 9 per cent lived more than two years

1701 H Street

EXTENSIVE COLLOID CHANGES IN THE CHOROID, WITH REPORT OF CASES

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY JOHN T CARPENTER JR , M D
PHILADELPHIA, PA

In some of the text books on ophthalmology mention is made of a senile change in the fundus oculi, characterized by the appearance of small yellowish and yellowish white spots which have been regarded as hyalin or colloid degeneration in the lamina vitrea choroidea In Noyes we find a full description under the head of degenerative changes of the choroid, in which he assumes the identity of drusen and this colloid degeneration of the lamina vitrea He calls attention to the clinical fact that vision is not impaired in these cases Two excellent colored plates representing two varieties of the affection are shown, to both of which I wish to call attention In one, the large, globular, mulberry-like masses are seen both upon the nerve head and in the outlying fundus This plate is taken from Lawson's case, reported in the Transactions of the Ophthalmological Society of the United Kingdom, vol III The second from Nettleship's case, vol IV of the Transactions of the Ophthalmological Society of the United Kingdom, shows the other variety, in which the lesions are small yellowish dots, showing a tendency to group in large numbers in the central region of the eye ground This picture, is a very faithful delineation of a variety of colloid change, which Tay, and afterward Nettleship, designated “guttate choroiditis ” The term “verrucosités hyalines’ had also been applied to this affection by French writers (Terson) Many original articles have appeared on the subject in ophthalmologic literature, among which that of A Terson (*Arch d Ophthalmologie*, No 6, 1892,) contains a complete bibliography and a very thorough resumé of the anatomic and histologic points involved In all the reports, the fact seems to be established that these lesions are simply senile degenerative changes, or, if seen in adult life, they accompany severe intra ocular disease

There seems to be no excuse for the various names under which this affection has been described There are no evidences of choroidal inflammation, but simply a retrograde change in the lamina vitrea choroidea, and hence the use of the word choroiditis is inadvisable Colloid degeneration has been found occurring in the cartilages of old people, and according to Fuchs, the arcus senilis is produced by colloid changes in the periphery of the cornea The most satisfactory term for this affection would seem to be “colloid changes in the choroid ” The hyalin masses on the nerve-head, or drusen, of which I reported cases in the *International Medical Magazine*, November, 1893, have been regarded until recently as identical with colloid choroidal lesions Hirschberg, (*Centralbl fur prakt Augenheilk*, June and July, 1891) after extensive study of post-mortem specimens with different chemic reagents (for the details of which consult his article) advanced the opinion that these were two separate diseases His position was strengthened by the very thorough post-mortem study of de Schweinitz, reported in the Transactions of the American Ophthalmological Society for 1892 He also believed them to be distinct affections From the clinical as well as ophthalmoscopic standpoint, however, these lesions appear to be identical In this article I report a case, with rough but accurate drawing of the fundus, in which typical drusen and colloid changes of the choroid are associated in the same eye ground There are many difficult points in arriving at a decision that will reconcile all the conditions present

There is still considerable doubt among anatomists regarding the exact anatomic relation of the sclera and choroid at the lamina cribrosa It has been denied that the lamina vitrea choroidea is found in this situation and hence the impossibility of these colloid masses, on the nerve head, springing from the lamina vitrea, has been insisted upon Again, there are conflicting views as regards the origin of the colloid changes in the choroid By some they are regarded as of epithelial origin, by others it is claimed that the intercellular tissue of the lamina vitrea breaks down and forms colloid degeneration Without attempting to reconcile the views advanced by different observers, the subject viewed from a clinical standpoint would seem to show the identity of drusen and these colloid changes Patients suffering from choroidal disease affecting circumscribed areas, rarely consult the ophthalmologist on account of symptoms directly referable to the choroidal lesions With the ophthalmoscope, the yellowish or whitish spots, often heavily pigmented and scattered over the eye ground, constitute the familiar picture of choroiditis It is in the associated retinal involvement, and that, too when the more central portions of the eye ground are diseased, that reduced vision, lowered light sense, metamorphosia, photopsia or scotoma form part of the clinical picture of choroiditis True it is, moreover, that these associated retinal changes are the rule in inflammation of the choroid In colloid changes of the choroid, although the ophthalmoscopic appearances are startling and the masses occupy the macular region, over an extensive area, at no time in the clinical history of the disease is the functional activity of the retina interfered with From ophthalmoscopic examination, the observer would expect to find a large central scotoma interfering with the use of the eye and producing marked visual defect On the contrary, sharpness of sight remains unaffected and there is not even a reduction in the light-sense as tested by lowering the illumination upon the test letters

There are two distinct clinical groups which have as their distinguishing features the size of the separate globular formations and the character of their arrangement in the fundus In the first group, corresponding to "guttate choroiditis," the affection occurs as separate, small, yellowish dots, often no larger than the diameter of a retinal vein, showing a marked tendency to invade the macular region where they are often so numerous that an appearance of heaping is produced At times, however, the picture is not unlike an atypical form of albuminuric retinitis

In the second group we have large globular acinous formations similar in appearance to drusen and as in that affection, occupying symmetrical positions in both eye-grounds Each globular mass may have a diameter equivalent to three or four times the size of a retinal vein

In connection with this paper, three cases presenting all the features of this rare and interesting disease are reported Before relating the clinical histories, I wish to call attention to the fact that these colloid changes when sought with the ophthalmoscope, appear much more pronounced under lowered illumination When examined under the enlarged image of the direct method with lowered illumination, the observer frequently changing the direction in which the light strikes the fundus by moving the mirror from side to side, these translucent masses seem to be thrown into relief against the background of the fundus and their true size and appearance can then be best appreciated In presenting the following clinical histories only the more characteristic in the two groups have been selected Among the distinguishing features, from a general standpoint, my experience has been that the colloid changes in group one, have invariably been seen in patients past middle life, the average age being from 60 to 70 Whether it is simply a coincidence or not, rheumatism of a severe chronic type, often with articular changes, was seen in nearly every patient of this group In one exception to this rule in which the small, yellowish colloid dots filled the macular region in a patient aged 28, there were all the evidences of marked gouty diathesis It is worthy of note that both gout and rheumatism, as well as Bright's disease, were frequently found associated with drusen (Gurwitch)

Case 1 —Miss F , aged 63, a sufferer from chronic rheumatism, with sclerotic changes in the arteries, consulted me for presbyopic trouble The entire fundus showed small yellowish spots more numerous in the macular region, choroidal in situation, and symmetrically placed in each eye Her corrected vision was 6–6 Examination of the urine gave negative results Two years later, the vision and fundus condition remained the same The ophthalmoscopic picture suggests albuminuric retinitis

Case 2 —Daniel F , aged 70, *was seen Dec 11, 1893* He sought advice because of inability to use his eyes at the near point The case is important as showing both large and small *globular yellowish* masses in the same eye In the right eye the ophthalmoscope showed in the temporal region around the macula lutea, an area composed of large and small colloid changes in the choroid The largest of these masses showed a diameter equivalent to four times the diameter of a large retinal vein There were *no secondary* retinal changes H=1D In the left eye, the small yellowish dots were seen scattered more generally throughout the fundus, as well *as grouped in the macular region*, but no large masses were discovered With +1 00 D⊃+1 00 cyl ax ; 90° corrected vision was 6–6 Urine examined and found negative

Under the second group, I shall report more in detail the clinical histories of three patients in whom the colloid changes were startling in appearance, covering *extensive portions of the central region* in both eyes, and occurring in patients of early adult life In one case there was *pulmonary tuberculosis*, in another chronic interstitial nephritis, and in the last, a marked gouty diathesis

Case 1 —Mrs S , aged 36, (whose fundus appearances are shown in water-colored sketch) consulted me on April 22, 1893, suffering from accommodative and muscular asthenopia She was extremely neurasthenic, and the ophthalmoscopic examination *was difficult on account of marked* retinal hyperesthesia Her appearance suggested pulmonary phthisis, and she stated that three years ago she was examined *and that the* sputum showed bacilli After spending a year and a half in a warm dry climate she had returned apparently cured of pulmonary disease In the right eye vision 6–12 , in left eye 6–12 She read type D 0 50 to 17 centimeters At 6 meters, there was esophoria of 18° At 30 centimeters 14° She had been suffering from severe headache and weak eyes, complained of diplopia after reading or sewing, and nausea and vomiting followed prolonged use of the eyes *at close work The ophthalmoscope* revealed in the macular region of each eye an area horizontally oval 3 + 2 disk diameters, composed of globular, yellowish, mulberry-like masses over which the retinal vessels passed with some slight elevation There were no evidences of secondary retinal changes The lesion closely simulated drusen Careful examination of the entire fundus showed occasional small yellowish dots but no large masses such as were seen in the macular region An interesting fact was the high degree of esophoria, present, and the opinion was advanced by Dr S D Risley, who saw the case, that the macular condition *might account for the muscular defect* The diagnosis lay between tubercular disease which was favored by the general condition of the patient, and colloid changes in the lamina vitrea choroidea Her corrected vision was 6–7½ in each eye, and the field of vision was normal A year later when I tenotomized both interni with marked benefit to the patient, the vision rose to 6–6 Dr de Schweinitz saw the patient and at that time spoke of its marked resemblance to a case which he has since reported with a water-color sketch of the fundus, in last year's Transactions of the American Ophthalmological Society

Case 2 —Mrs R , aged 40, was referred *to me* by Dr H A Slocum for examination of the fundus There was chronic interstitial nephritis, and some disturbance of vision, more marked in the left eye, led him to refer the case to me to determine whether the refractive error or a retinal lesion were responsible for the visual defect Her right vision was 6–6 , left vision 6–9 The ophthalmoscopic examination in the right eye showed simple congestion of the nerve head with soft blurring of its edges H. = 2 or 3 D In the macular region an extensive area three times the size of the disk was covered with characteristic colloid acinous formations. There was in this eye some *choroidal* atrophy which was much more marked in the left though there were no retinal changes Careful correction of the refractive error of the left eye failed to improve the vision beyond *6–9 There were* no typical retinal conditions suggestive of Bright's disease. The water-color sketch of the previous case would almost apply to this fundus

Case 3 in this interesting group, is that of Mr H , aged 38, who consulted me on Sept 17, 1894, on account of accommodative asthenopia Both eye grounds showed the most remarkable condition of colloid changes that I have ever seen Mr H was a man of slight build nervous temperament, of strong gouty tendency, whose urine showed an excessive amount of uric acid with high specific gravity Syphilis and tuberculosis can be absolutely eliminated from the history after a careful study With his hypermetropic astigmatism corrected, his vision was 6–6 in each eye The fundus presented the following remarkable characteristics the entire choroid was occupied by numerous disk-shaped areas, three or four times the diameter of a retinal vein, yellowish in the center with lace like delicate pigmentation of retinal and choroidal situation The entire fundus being occupied by these colloid changes gave an ophthalmoscopic picture simulating disseminated choroiditis In fact the diagnosis from disseminated choroiditis in this case was one of considerable difficulty The absence of any important retinal, optic nerve and vitreous involvement, was strictly in favor of the colloid nature of the lesion as opposed to its being an inflammatory disease of the choroid Careful examination of his field of vision showed no defect and there was absolutely no reduction in a light sense Dr de Schweinitz who also saw this case, was of opinion that it was colloid degeneration of the choroid, with secondary pigment disturbance without involvement of the important retinal layers The lesion was perhaps congenital or at least of infant origin At his suggestion I examined other members of Mr H's family without finding a similar choroidal lesion on either side, although the family record was poor, there being several cases of glaucoma among maternal aunts At the present day the vision remains normal and the fundus appearance has not changed

Case 4—The last case to which I desire to call attention is one presenting choroidal changes of colloid nature together with extensive denser formation of the nerve head, which is almost concealed by thickly packed globular masses The fundus appearances in this patient aged 59, whose corrected vision was 6–6 are shown in my rough drawing

In conclusion, certain points in the study of this choroidal affection impressed me as being worthy of summarizing 1, the entire absence of any visual defect resulting from even the most striking ophthalmoscopic changes, 2, the almost constant relation between senility and the multiple small colloid masses seen in group one, and the absence of any such relation in the large globular masses of group two, 3 the almost invariable situation of the lesion in the central or macular region and the symmetry of arrangement in each eye, 4, the importance while studying the fundus of using a low power of illumination and of continually changing the direction of the light from the ophthalmoscopic mirror in order to reveal the true outlines of these masses, 5, the clinical proof of the identity of drusen with these extensive colloid changes, both from the standpoint of symptomatology as well as from the fact that in at least one case, drusen and colloid changes of the choroid existed in the same eye, 6, and lastly, the importance of diagnosing this colloid change of the choroid from exudative choroiditis, tubercular disease of the choroid and in some instances from albuminuric retinitis of the macular region

108 S 18th Street

DISCUSSION

Dr G de Schweinitz, Philadelphia—As you know, I have had the opportunity of studying microscopically the so-called drüsen in the nerve head and, clinically several cases of choroidal diseases resembling these hyalin bodies in the papilla Thus far, at least, it is not proved that the drüsen and the colloid bodies springing from the lamina vitrea, are identically pathologic processes Moreover we are not in possession of the information which decides what relation these so-called colloid choroidal changes which I have figured and which Dr Carpenter so well described this morning bear to the other two lesions, viz, drüsen and colloid bodies from the lamina Therefore I am doubtful whether all of these cases should be grouped together, although I am sure we should all agree with Dr Carpenter that they constitute a class of cases to be separated from inflammatory disease My experience with guttate changes is that they always produce defective central vision and negative scotoma, while these colloid macular changes in young people are not connected with defective central vision indeed, even the light sense is perfect Drüsen may be seen in otherwise normal nerve heads or in one that is atrophied, therefore they may be associated, with or without visual disturbance Symmetrical disposition of the drusen is not universal I have reported one monolateral case and studied another Dr Gifford, I know, is now studying a similar unilateral case On the other hand, the colloid changes in the choroid, in my experience, are always symmetrical Dr Carpenter's cautions in regard to the best method of studying these lesions are timely

Dr B Alexander Randall, Philadelphia—Several pathologic conditions are comprised in these "colloid" appearances as many of us have doubtless seen, colloid degeneration of the retinal pigment epithelium, colloid deposits in the choroidal stroma, and similar lesions in the retina akin to the mere serous vacuolization that is so commonly seen at the periphery In a considerable group of clinical cases it has seemed impossible often to discriminate which process was present in the ophthalmoscopic picture

Dr Harold Gifford, Omaha, Neb—I have followed some cases of this disease for several years One case occurred in a girl 9 years of age with a very remarkable change in the optic nerve This case I report as an exception, in that the sight was entirely destroyed The retinal arteries were obliterated, whether as the result of colloid changes or of some other disease I am uncertain One point you should consider is, What sort of prognosis are you going to give? Will they retain what vision they have through life? I have had a case in which sight was reduced to 20–50 by these changes, that is, I could find no other cause for the reduced vision

Dr Herman Knapp, New York—I wish to acknowledge the value of Dr Friedenwald's paper The subject of hemorrhages in the background of the eye is larger and more important than we formerly thought Many of the varied appearances of striation and white or black deposits which were formerly complained of can now be referred to previous hemorrhages after we have had time to watch a large number of cases where the gradual conversion of the blood into these conditions could be followed up As to the clinical course of the colloid excrescences of the choroid I have the advantage of age over most of you, in stating that for years they can remain in *statu quo* In a gentleman whose eyes had extensive colloid deposits in the choroid, they have not notably changed these twenty years Regarding the differential diagnosis, these excrescences may be mistaken for a disseminate choroiditis as it occurs in syphilis In the latter disease the small patches have a somewhat notched border beset with pigment (as the colloid occasionally are too) and their color is white, the white of the sclerotic, whereas the colloid deposits look dull white like old ivory

Dr J T Carpenter Jr Philadelphia—I am glad to hear from others that the question of diagnosis between disseminated choroiditis and some cases of extensive colloid choroidal degeneration has been one of some difficulty The grouping of these cases was done simply from a clinical standpoint The prognosis is invariably good as regards vision, and Dr Gifford's cases must have been of serious optic nerve lesion, probably posterior to the papilla

THE TECHNIQUE OF TENOTOMY OF THE OCULAR MUSCLES

Read in the Section on Ophthalmology, at the Forty sixth Annual *Meeting of the American Medical Association*
Baltimore Md, May 7 10 1895

BY LEARTUS CONNOR, A M, M D
DETROIT MICH

It is desirable that both patient and operator be in good physical condition The surgeon, his assistant, patient, instruments, and operating room should all be rendered as aseptic as possible, because asepsis is the fundamental principle of modern surgery, which no ophthalmologist can afford to disregard, even when doing an ocular tenotomy The operator's hands should be washed with pure soap and hot water, by the aid of a hand brush, so as to loosen all bacteria and other infectious materials lodged on the skin, attached to the hairs, embedded in the mouths of the oil or sweat glands or under the finger nails This loosened *débris* is best removed by running hot water The face, and beard (if the operator have one), are cleansed with scrupulous care When dried, the hands are soaked in bichlorid solution, 1 to 1000 The assistant and patient cleanse themselves in a similar manner Especial care is taken to free from all septic material the edges of the eyelids, lacrymal passages and conjunctiva by washing with the bichlorid solution The instruments are to be sterilized in steam or boiling water, and just before using, soaked in absolute alcohol, dried and laid upon an aseptic tray The room freed from all infection should afford adequate light, as the best work is impossible unless the surgeon can see distinctly each step

An anesthetic, local or general, is imperative Usually cocain suffices, but occasionally the patient is so uncontrollable as to compel the administration of a general anesthetic—ether, chloroform or methylene bichlorid The surgeon's personal views, determines his selection of the anesthetic Unquestionably, chloroform is more dangerous, but it is more pleasant to both patient and operator, and I do not recall a death from an ocular tenotomy done under its influence The instruments needed are a speculum, lid retractor, fixation forceps, fine toothed forceps, a blunt pointed scissors curved on the flat, tenotomy hooks, fine needles and fine silk sutures, sterilized absorbent cotton and bandage

The several steps of the operation are 1, the opening of the conjunctiva, 2, opening the capsule of Tenon, 3, lifting the tendon from its sheath, 4, division of the tendon, 5, dressing of the wound It is improbable that any operator takes these steps exactly as any other, but all open the conjunctiva and capsule, divide the tendon and dress the wound in some manner Some open the conjunctiva and capsule at the lower edge of the tendon and parallel to its fibers, some at the center of the tendon and in the same direction, some at right angles to the tendon fibers, either at their outer edge, at their center or along the entire line of their insertion, some make the opening large, others of medium size, and others small Some divide the tendon subconjunctivally, others partially so, and others openly Some unite the edges of the conjunctiva with fine silk suture, others leave the wound entirely open Some use forceps to lift the tendon for division by the scissors, others use the blunt hook of various shapes, all however use either forceps or blunt hook Doubtless each surgeon, by more or less unconscious experiment, finds the method suited to his personal equation and adopts it, as giving him the best results The end sought is the division of the tendon close to its insertion, without unduly disturbing the adjacent tissues

Some surgeons dress the wound by putting a few drops of boric acid solution into the conjunctival cul-de sac, then a bit of linen moistened in bichlorid solution on the closed lids, then a bit of borated cotton and, finally, a bandage over all, others after cleansing the conjunctiva, simply close the lids with isinglass adhesive plaster, others leave the eye entirely open, after the effects of the cocain have disappeared, others protect the eye from light, dust and wind with a blind, and have the eye soaked in hot water at regular intervals, to hasten repair and relieve discomfort Good results attend any of these variations in operating or dressing, at the hands of a skillful operator While unable to discuss their merits or demerits, the open dressing commends itself because it best utilizes the vision of the squinting eye in fixing the eyes in the best position while re-attachment of the divided tendon is taking place If the operation be done aseptically the wound should be carefully closed by suture, unless from its small size and horizontal direction there is no necessity to exclude air after the effects of the cocain have disappeared

In estimating the effects of a tenotomy we must consider the weakened power of the muscle operated upon, the muscular force of its antagonist, and the elasticity of the tissues—factors which vary greatly in individual cases Roughly, the force of the muscles can be determined by the degrees to which they are able to turn the eye in the direction of their long axes, during their greatest contraction This motility affords a sound guide in estimating the effects of a tenotomy Thus, if the motility of the muscles be unchanged, clearly the operation is ineffective and the cause must be searched for and removed

To operate intelligently, the surgeon must, first, measure the extent of the strabismus, and to know his results he must repeat his measurement after the tenotomy The best means for making such measurements are the use of prisms, producing double images at 6 or 7 meters The difficulty with this method, lies in the fact that not all squint eyes possess sufficient vision to render it available Such cases compel the surgeon to select a method applicable to them The varieties of these are legion Some operators depend entirely upon their own eyes, both in measuring the amount of squint, and the perfection of its correction Others mark with an ink dot the position of the center of the pupil or edge of the cornea of the squinting eye, on the edge of the eyelid, both in the squinting and fixing position—the space between the two dots roughly measuring the deviation The strabismometer, with others takes the place of the ink dots In Graefe's method, the flame of a candle is fixed by the squinting eye at a distance of 5 meters, and the zero point of the scale brought beneath the corneal image of the flame Then the fixing eye is arranged for the same flame, and we note how far from the middle of the pupil the squinting eye has deviated from zero The observer should be in the visual axis of the squinting eye, while making his observation The secondary variation of the fixing eye is measured in the same manner Of the many other methods, by perimeters, tapes, boards, etc, we can not speak

In my own work, the following technique has proved satisfactory the vision of each eye is carefully noted, all ametropia, ascertained under atropin, fully noted, if such correction will diminish the strain upon the weaker muscles, The power of the several muscles is measured, all defects being accurately recorded The method of ascertaining the amount of squint is selected according to the character of the case, always when possible utilizing prisms The operation is planned, so that there will remain a slight convergence immediately after the tenotomy of the interni or externi, but in vertical squint I aim to undercorrect In all cases it is sought to secure such motility of the muscles as will so obviate their defects as to enable them to center the visual lines upon an object within the fields of vision The accomplishment of this frequently calls for the division of the operation between the muscles of the two eyes, even though an operation on one might make the eyes straight The instruments used are a pair of scissors, curved on the flat, both points blunt, blades narrowed near their ends, firm enough to divide the tendon without springing, and so nicely adjusted as to cut the tissues to their very ends The forceps are delicate, yet sufficiently strong, that they readily grasp and hold firmly the tendon The blunt hook is curved nearly at a right angle and quite small, as it is used to lift but half of the tendon at once, because I operate from the center toward either side The speculum and lid retractor are unimportant, if only they afford an unobstructed view of the field of operation, and cause the patient a minimum of discomfort The lid retractor in the hands of a good assistant, is especially convenient when operating upon the superior or inferior recti

The fixation forceps is rarely called for, except in cases requiring a general anesthetic, because under cocain the patient is able to hold the eyeball in the correct position These instruments are sterilized, dried, soaked in absolute alcohol, wiped and placed on a clean tray just before using

The patient lies in a half reclining chair, facing a good light, with head wrapped in towel moistened in bichlorid solution, and clothes covered with a clean apron to the neck The operator, assistant and patient have been rendered aseptic by the method described

The cocain solution, 4 per cent, made with distilled water and 16 grains of boric acid to the ounce, is dropped in the cul-de sac of the eye to be tenotomized, repeated every few moments till the conjunctiva has become insensible, and during the several stages of the operation, as the case demands

The assistant steadies the patient's head, prepared to remove with absorbent cotton any hemorrhage which may obstruct the field of operation

In tenotomy of the internus, the operator sits or stands, facing the patient, who is directed to turn the eyeball strongly outward, the conjunctiva is seized with the forceps, so as to make a small vertical fold, directly over the insertion of the tendon With the scissors this fold is divided, making a short horizontal opening of the conjunctiva Through this opening the forceps grasp the tendon sheath forming a vertical fold similar to that made in the conjunctiva, this fold is divided, thus laying bare the tendon, which is seized by the forceps so as to make a horizontal fold, and by slight traction from the eyeball, exhibits its insertion The division of this fold close to the sclerotic, by the scissors, makes a central opening into the tendon The fibers on either side are now severed, by placing one blade of the scissors beneath, and one above the tendon but below the conjunctiva, and closing the blades one or more times as may be needed Usually this can be done completely by the scissors alone, but if it fails, the little blunt hook is made to enter the wound in such a manner as to catch stray attachments, and permit their division with the scissors The motility of the eye outward is now examined, if it equals that of the other eye, enough has been done, but if it retain the same motility as before the operation, then the occasion needs to be sought and removed The behavior of the eyes when fixed upon an object at one-sixth of a meter or less is important, if they diverge, we know that the effect is too great and must be limited by suture If they converge as before the operation, the tenotomy has been imperfect, but if the eyes remain steady or slightly converged, the result will be satisfactory, or, still more certainly, if, when tested by prisms, at 6 meters, the eyes maintain a condition of vertical equilibrium—the misplaced arc of movement of the squinting eye has been replaced in its normal position

But if the tenotomy has failed to adequately reduce the convergence, we have several courses of procedure, doing of a tenotomy on the other eye, severing more or less freely the attachments of the muscle or muscles, the use of sutures, advancement of the weaker muscle, or increasing the relative power of the defective muscles as in insufficiencies In convergent squint I have never had occasion to use a suture to increase the effect of the tenotomy In tenotomy of the externus, the eyeball is turned strongly inward in the horizontal meridian, the conjunctiva grasped by the forceps at about 7 millimeters from the external border of the cornea and the other steps taken as when operating upon the internus About 2 degrees may be gained by a simple tenotomy of the externus, though this is uncertain and likely to diminish after a time The use of sutures from the superficial fibers of the sclerotic, at the inner sclerocorneal junction, to the inner commissure, will enable the surgeon to greatly increase this effect If both eyes be tenotomized, the sutures may be tied over the bridge of the nose, and the divided ends of the tendons made to unite with the sclerotic as far back as desired I prefer the advancement of the weaker muscle to the use of sutures in divergent squint

In tenotomy of the superior rectus, the eyeball is turned downward as far as possible, so as to bring its insertion fully in view The assistant by a lid retractor lifts the upper lid, the conjunctiva is opened at about 8 millimeters from the corneal margin, and the further steps taken as in the other tendons The insertion of this tendon is near that of the superior oblique, and slants outward and backward, points worthy of remembrance during the tenotomy Tenotomy of the inferior rectus is done in the same manner as that of the other tendons, the insertion being about 7 millimeters from the corneal margin

After each operation the position of the eyes, and the motility of the muscles are carefully studied, so that if the effect be insufficient it may be increased by some available method, or if it be too great it may be restricted

The opening into the conjunctiva is so small and so located that it usually closes sufficiently without suture The conjunctival cul de sac is cleansed with boric acid solution, the eye protected from light by a shade until the effects of the cocain have passed away, and then left open The patient is directed to soak the eye in very hot water frequently, to relieve discomfort and promote repair of the wound

An ocular tenotomy, done after the manner described, is nearly painless and bloodless, absolutely free from any danger, involves the least traumatism, gives very definite results requires no after dressing, and secures binocular vision, if this be possible by a tenotomy

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THE SLIGHT EFFECT SOMETIMES OBTAINED AS THE RESULT OF FREE TENOTOMIES OF THE OCULAR MUSCLES FOR HETEROPHORIA

Read in the Section on Ophthalmology, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md May 7 10 1895

BY SAMUEL THEOBALD, M D

OPHTHALMIC AND AURAL SURGEON TO THE JOHNS HOPKINS HOSPITAL, AND TO THE BALTIMORE EYE EAR AND THROAT CHARITY HOSPITAL

BALTIMORE

I believe it is a generally recognized fact that in operations upon the external eye muscles for the correction of heterophoria or of strabismus, a given amount of "tenotomizing"—if one may use this convenient, but, perhaps, not altogether legitimate word—is by no means always followed by a corresponding and definite amount of correction The same degree of section of the muscle and capsule in one case produces a marked effect, while in another, the result of a precisely similar operation is comparatively slight No comprehensive and satisfactory explanation of this fact, so far as I am aware, has yet been offered, and I think it may be safely asserted that even the most experienced operator can not say with any assurance, in advance of a tenotomy, just what the effect of a given amount of cutting will be

As a general principle, it may be asserted that the result of a tenotomy upon an ocular muscle will depend upon the extent to which the muscle's attachment to the sclerotic is set back If the divided tendon re attaches itself to the sclerotic, without slipping back—at the point of its previous attachment—the effect will be almost or quite *nil*, on the other hand, if it slips back considerably, the effect will be marked In accordance with this generally recognized rule, when one wishes to obtain a decided effect from a tenotomy one does not limit the section to the tendon, but divides more or less freely Tenon's capsule, which permits a wider recession of the muscle, while, if a slight effect is desired, one includes in the section only the tendon proper To this extent the effect of our operations is under control, but the fact still remains that the result of a given amount of cutting varies very greatly in different individuals While, as has been said, we do not fully understand the reason of this, the matter is one as to which we are, at all events, not wholly in the dark

It may be safely affirmed, I think, that, other things being equal, the smaller an eyeball is, and, perhaps, the more deeply seated it is in the orbit, the less will be the effect of the division of one of its muscles, the larger the ball and the more prominent its position, the greater will be the effect Hence it follows that, as a rule, a tenotomy upon a hypermetropic eye may be expected to produce a less marked result than a similar operation upon a myopic eye The explanation being that in the larger, and more prominent myopic eye the tendon recedes to a greater extent before becoming re-attached than it does in the smaller, and less prominent, hypermetropic eye

My experience inclines me to the belief also that, usually, a tenotomy performed for the correction of an actual squint produces a relatively greater effect upon the muscular balance of the eyes than does one performed for the relief of heterophoria, and here, again, it is probably a question of the extent of the recession of the divided muscle, for this, it would seem, is likely to be greater in the case of the contracted muscle of squint, than in the muscle of normal length with which we have to do in heterophoria

The comparative size of the muscle operated upon, whether a thick, well developed muscle or the reverse, has also seemed to me to have an influence upon the result For example, a tenotomy performed upon a slender internal rectus muscle, which has only been able to develop a convergent squint of intermittent character, will produce a more decided effect than one upon a well developed muscle, such as is usually found in the fixed type of convergent strabismus

It seems probable, too, for some reason that we do not yet understand, that the muscles of certain eyes, when separated from the sclerotic, have a greater disposition to retract toward their orbital attachment than the corresponding muscles of other eyes, and this would tend to increase the effect of their division The thickness and strength of Tenon's capsule, which doubtless vary in different individuals, would also probably exert an influence upon the recession of the muscle and hence upon the effect of the tenotomy

While in strabismus we usually expect a better and more decided result from a tenotomy performed upon the internal rectus than from one done upon the external rectus, the striking instances of slight effect following free tenotomies for heterophoria which I have met with, have invariably occurred in operations upon the internal recti for esophoria

In order not to consume the time of the Section, I shall describe briefly only two of the most striking of the cases of this character which I have encountered, but I may state that I have the records of others which almost parallel them

Case 1—Miss P a school girl, about 16 years of age, was brought to me in November, 1893, for the relief of asthenopia The ophthalmoscope revealed only a slight amount of hypermetropia, but showed marked negative symmetrical aberration of both eyes By the vertical diplopia test there was esophoria at 20′ of 11°, at 13″ of 8½° A later examination, a few days subsequently, gave, however by the same test, only 7½° of esophoria at 20′, and 7° at 13″ A mydriatic was used (hyoscymia hydrobromate) and revealed hardly 75 D of hypermetropia Under its influence there seemed to be a little astigmatism according to the rule, but this finding was not confirmed after the effect of the mydriatic disappeared With paralyzed accommodation, the esophoria at 20′ was 10½°

On Dec 8, 1893, the vertical diplopia test having previously shown esophoria at 20′=9°, I did, as my notes state, a "pretty free tenotomy" of the L internal rectus Two days afterward there was esophoria at 20′=1°, with orthophoria at 13″ May 3, 1894, with L eye + 50s, R eye + 37s, there was esophoria at 20′ varying from 9° to 11° At this time I prescribed glasses for constant wear as follows

L eye ⊃ 50s Prism 3° base out
R eye ⊃ 37s Prism 3° base out

May 19, the vertical diplopia test gave, with these glasses on, additional esophoria at 20′ of 10°, *i e*, a total of 16° I then did "a free tenotomy" of the R internal rectus, dividing Tenon's capsule "almost as freely as for squint," as noted at the time in my record of the case Two days afterward, without correcting glasses, I found esophoria at 20′=7°, at 13″=4° A few weeks later there was esophoria at 20′=11°

The last examination of the muscular balance was made Oct 31, 1894, and showed, by the vertical diplopia test, with full correction of the manifest hypermetropia, esophoria at 20′=9° Thus it will be seen that in this case a free tenotomy was performed upon each internal rectus (one of them involving a liberal division of the capsule) without appreciably reducing the original esophoria, for, it will be remembered that the esophoria at the first examination varied in amount from 11° to 7½° at 20′

Case 2—Mr W, aged 26, artist, consulted me on account of asthenopia, in July, 1890 He was wearing at the time for each eye + 50c 90′ Without correcting glasses the vertical diplopia test showed esophoria at 20′=10½°, at 13″=8° There was no hyperphoria The ophthalmoscope showed less than 1 D of hypermetropia, and this was subsequently confirmed by the use of a mydriatic (a 2 grain solution of duboisia) A later test, with full correction of the astigmatism and manifest hypermetropia, showed esophoria at 20′=9½°, at 13″=8°

July 24, 1890, I divided the L internal rectus "completely" Two days later there was esophoria at 20′=10¾°, at 13″=7° July 31 esophoria at 20′=11½°, at 13″=7°, adduction at 20′ =35°, abduction =8° August 2, I did a free tenotomy" of the R internal rectus, "*dividing the outlying fibers of Tenon's capsule*" Two days later there was still esophoria at 20′ =8°, at 13″=6½° to 7° October 14, with the glasses prescribed for the correction of his manifest error of refraction, there was esophoria at 20′=6°, at 13″=2° Without correcting glasses there was esophoria at 20′=7°, at 13″=4° At 20′ there was adduction =46°, abduction =10° March 12 1891, with his correcting glasses, there was esophoria at 20′=7½° to 8°, at 13″=4°, no hyperphoria As the result of gymnastic exercises with prisms there was, subsequently, a reduction of the esophoria of about 2½°, which, however, was probably *not* permanent In this case, as will be seen by a comparison of the tests made with correction of the *manifest refractive error before and after the operations*, there was, as the result of two free tenotomies (such as would have sufficed, in many cases, for the correction of a decided strabismus) a lessening of the esophoria at 20′ of scarcely 2°, and at 13″ of only 4°

Before concluding, it may be well to mention the *manner* in which the tenotomies were performed in these cases and in other similar cases which I have met with Before the introduction of cocain it was my habit to perform all tenotomies subconjunctivally, but, I soon found that with the eye under cocain this operation was not so easy of performance, because of the tightening effect of the cocain upon the conjunctiva I, therefore, abandoned this method and adopted the "button-hole" operation, which I have since employed in all cases In performing this operation, I make a longitudinal incision through the conjunctiva directly over the attachment of the muscle, and then free the conjunctiva from the underlying tissue Next, I seize the tendon with forceps, and divide it just at its point of attachment to the sclerotic After the tendon proper has been divided, I introduce my crochet-pointed strabismus hook through the opening thus made and extend the incision upward and downward, dividing, more or less freely, as may be indicated, the lateral fibers of the tendon and Tenon's capsule This was, then, the method in which the *tenotomies* were performed in the cases which I have related

304 W Monument Street

THE LIMITATIONS OF TENOTOMY OF THE EYE MUSCLES

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10, 1895

BY HOWARD F HANSELL, A.M , M D

CLINICAL PROFESSOR OF OPHTHALMOLOGY JEFFERSON MEDICAL COLLEGE
ADJUNCT PROFESSOR OF DISEASES OF THE EYE PHILADELPHIA
POLYCLINIC CONSULTING OPHTHALMOLOGIST CHESTER
COUNTY HOSPITAL
PHILADELPHIA

If we assume parallelism of the visual lines to be the functional position of rest, maintained by unconscious innervation and divergence the anatomic position of rest (Hansen-Grut), orthophoria or equilibrium for far and near is a condition of adjustment or relatively equal tension or balance of nerve and muscular force, and is not in any sense a condition of repose or relaxation of the muscles as in sleep or in ether narcosis

Heterophoria and Heterotropia, tendencies to deviation or deviations, are the result of spasm or supranormal contraction of a muscle or set of muscles, or of weakness or insufficiency of their antagonists

In this paper I will consider, very briefly, the abnormal relations of the visual axes, non-paralytic in origin, and the operative methods which theory and practice seem to demand for their adjustment

1 *Esotropia or Internal Strabismus*—Hypermetropia is the cause in 75 to 90 per cent of all cases The squint is manifest and "active" and depends upon the relation of accommodation and convergence In recent cases the contraction of the internus is excessive and the abduction is of normal strength In ancient cases the muscular structure has undergone molecular change and abduction has become weakened

(*a*) *Concomitant or Alternating Squint*, fixation with either eye, the vision practically the same in each *Amblyopia is necessarily precluded* The deviation is upward and inward, the latter manifest, the former easily demonstrated by the relatively lower position of the false image The obliquity of the squinting eye is convincing evidence of the associated and responsive action of the external muscles supplied by the third nerve to the stimulation of the accommodation, but it has no bearing on the result of treatment directed to the interni, since the upward deviation is transferred with the inward, when fixation is transferred, and since both eyes functionate, though not simultaneously, neither external rectus undergoes *degeneration or indeed loses any of* its abducting power When the prolonged paralysis of accommodation followed by full correction of hypermetropia worn for a sufficiently long time have proved inefficacious, tenotomy of each internal rectus, dividing the operation equally between the two muscles, and without advancement of either externus, is the proper surgical procedure The effect of the operation can be readily determined by the approximation of the false and true images, and when finally they have fused, the desire for binocular fixation or of fusion will maintain them single

(*b*) *Constant Monocular Squint*, one and the same eye always used in fixation, the squinting eye amblyopic The cornea of the amblyopic eye is turned inward and upward, owing to the combined action of the extrinsic muscles under the control of the third nerve Outward rotation is limited The external rectus is deficient in power and innervation, the muscle itself having become flabby, stretched and incapable of normal function Tenotomy of either or both internal muscles is unavailing, without advancement of the external of the squinting eye In addition, section of the superior of the same eye is often necessary The operation, sometimes practiced, of extensively dividing the internus together with its lateral attachments, thus practically paralyzing the muscle, gives a temporary cosmetic improvement but is to be deprecated, since that eye in the course of a few months or a year will become divergent We can rarely, if ever, in these cases restore the function of the squinting eye, and our operations may be the cause of annoying diplopia

2 *Exotropia, or Divergent Strabismus*—The common causes of external squint are loss of convergence through deficient innervation or muscular weakness, and loss of convergence from mechanic and anatomic obstacles to adduction The former

is found in those cases which arise independently of refractive error and can not be ascribed to it, in patients convalescing from exhausting illnesses, in neurotics or those who suffer from accommodative asthenopia from low degrees of heterophoria and astigmatism and whose general muscular and nervous system is responsive to slight abnormalities. It is seldom due to absolute supra normal strength of the externi but innervational weakness of the interni, not a loss of muscular power of each internus, for the balls are susceptible of full rotation but a loss of convergence, probably of central origin.

In order to effect a cure, adduction must be raised to the normal standard. The innervation may be increased, I believe by nerve tonics, such as nux vomica and the muscular contractile power by prism exercise, but these means are unavailing and a waste of time unless binocular vision is present, at least in part. Surgical interference is necessary and we have an apparent choice of three procedures—tenotomy, advancement, or a combination of both. Tenotomy is objectionable since we are destroying instead of building up, weakening a normal set of muscles to a degree to correspond to an abnormal weakness of the antagonists, limiting abduction and perhaps giving crossed diplopia for near, and homonymous diplopia for far, and never restore equilibrium.

The mechanical and anatomic obstacles to convergence are the increased length of the eyeball in myopia and the divergence of the orbits and the upper and outward position of the eyes in utter relaxation of the muscles as in sleep. The divergence of myopia is passive and chronic and follows the inability of the interni, unstimulated by and unassociated with accommodative effort, to converge the lengthened balls. Tenotomy alone is useless. Correction of the myopia, demanding the use of the accommodation on near work, prism exercise and advancement of the interni are sometimes effective. Careful inquiry into the history of cases of divergent squint will sometimes develop the interesting fact that the present deformity is the result of an early operation for the opposite defect. In such cases the advancement of one or both interni, without section of the externi is to be recommended.

3. *Hypertropia*.—The causes of functional hypertropia have been but little discussed. The traditional internal squint of hypermetropia is, according to Stevens (*New York Medical Journal* February 17), to be explained by the associated hypertropia, but he fails to name a cause for the latter. In my opinion hypermetropia is responsible for both, on the assumption that the strain on the accommodation induces overaction of not only the internal rectus but of the superior and inferior recti and of the inferior oblique. The image of the squinting eye is always on a plane lower than that of the fixing eye. Hypertropia in hetero phoria and in low grades of myopia where the accommodation is active, should theoretically be cured by advancement of the superior oblique. This is, however impracticable. In concomitant squint, hypertropia needs no treatment, in constant squint, tenotomy of the superior rectus is often necessary. Hypertropia in myopia (a rare complication) may be traced to a relaxation of all the muscles under the control of the third nerve, when the superior oblique and the external rectus having no opposition the cornea is rotated outward and downward (hypotropia).

4. *Heterophoria*.—The same principles of therapeutics apply to the tendencies to turn as to the actual turnings. A very large proportion of the cases are eso hyperphoria depending upon hypermetropia and astigmatism and require no surgical interference.

5. *Esophoria*.—A course of atropia or other mydriatic paralyzing the accommodation for some days, followed by the wearing of as near as possible, full correction, will often remove the symptoms for which tenotomy seemed to be indicated. Indeed, the presence of esophoria will often indicate latent hypermetropia. Guarded tenotomy of both interni will sometimes cure. It often may be repeated. Advancement is indicated when adduction is weak.

6. *Exophoria*, as exotropia, is a passive condition and can not be directly ascribed to an error of refraction as a constant cause and is due also to an innervational weakness of convergence. Tenotomy is powerless to effect more than a temporary cure. Advancement of the interni will often permanently cure.

7. *Hyperphoria* seldoms demands operation, notwithstanding the extraordinary claims made by enthusiasts. It is to be treated by a correction of the error of refraction which in most cases is its cause. Partial or complete tenotomy is to be performed only when full correction fails. An operation is successful when we can determine binocular fixation for all distances and there is no limitation of adduction or abduction or of lateral movements. Tenotomy as formerly practiced—wide division of the tendon and lateral attachments on the squinting eye only, invariably leads to disfigurement by recession of the caruncle and conjunctiva, and to loss of movement on the side governed by the operated muscle, with homonymous or crossed diplopia or both. Landolt has urged for twenty years that advancement shall substitute tenotomy in all cases of insufficiency and in most cases of strabismus. He reserves tenotomy for these cases only in which advancement has proved inefficient. His reasons are given in his paper read before the Congress in Edinburgh in 1894, to which I refer the reader who is not already familiar with the transactions of the Congress, these reasons are logical and forcible and will no doubt influence those uncertain as to the choice of operation. In my own experience, most satisfactory results have been obtained, in patients in whom I had failed to give more than temporary benefit by tenotomy. My method of operating by advancement is that recommended and, I think, suggested by Savage of Tennessee, with a slight modification. The conjunctiva and capsule of Tenon are dissected away, and the muscle and tendon exposed as far back as may be necessary for the insertion of the sutures. The muscle is elevated on two hooks and freed from its surrounding connective tissue. One needle of a double-armed thread is passed from without inward through the upper, and the second needle through the lower border of the muscle and the thread is drawn tightly, intersecting the muscle vertically its entire width. Each needle is then inserted from above downward and below upward, respectively, through the upper and lower border of the tendon at its insertion—*without separating the tendon from the sclerotic*. Before drawing the threads tight, a small portion of muscle back of the tendon and in front of the suture is excised, in order to oppose fresh surfaces which will more rapidly unite, and to prevent the lump which Savage says is always made. The muscle back of the suture is then

grasped with fixation forceps by an assistant and brought forward to relieve the strain on the suture When the suture is made taut, the knot is tied No conjunctival suture is necessary

254 S 16th Street

TENDON ADVANCEMENT AND TENDON RETROPLACEMENT

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY CHARLES HERMON THOMAS, M D
PHILADELPHIA

Reference is here made to advancement of tendons as distinguished from tendon resection or tendon shortening In the latter two, the stump of the partially severed tendon furnishes the point of attachment of the portion to be brought forward Not so, however, in tendon advancement This operation is required as a remedy for strabismus, insufficiencies, and for the results of old operations excessive in their effects Tendon retroplacement is here recommended as a control procedure, in connection with complete tenotomy, and is to be practiced at the time and as a part of the original operation

It may as well be said at once that in the opinion of the writer, the operation for tendon advancement, as described by Stevens and performed with the singularly delicate instruments which he has given us, may be substituted with advantage for all *other operations heretofore described* The small conjunctival opening with its minimum of integumental traumatism, the almost total-subconjunctival location of the sutures, the unirritating character of the sutures owing to their small size, the ease and exactness with which it may be practiced, and the freedom from after-irritation during the process of healing leave little to be desired

In a single particular only has any modification of Stevens' method seemed advantageous and that relates to the location of the stitch making the attachment to the globe The conjunctival stitch which he recommends having occasionally failed, I have sometimes made a sclerotic attachment not involving the conjunctiva A very small curved needle carrying the 000 000 thread of Stevens' is passed through the center of the extremity of the tendon to be advanced from without inward, and is carried forward to a point within the region denuded by the conjunctival incision and at the point selected for the attachment of the tendon and back of its original insertion The needle is now made to enter and traverse the superficial layers of the sclerotic, tunneling a distance of 1 or 2 millimeters in length and barely deep enough to make a firm hold, the firmness of which hold may be tested after the emergence of the point of the needle by a lifting motion at the hand of the operator The result is the tacking down of the tendon in a perfectly definite way to tissues of sufficient firmness to maintain the fixation of the parts involved until healing shall have taken place

It is to be expected that the result obtained at the time of operation will closely approximate the result finally reached I have frequently found a difference under these circumstances of not more than 1° or 2° The usefulness of such an operation in cases of old post operative deformities is manifest

Tendon retroplacement is in a certain sense a control procedure applicable in tenotomy where accurate dosage is essential In such cases, it not infrequently happens that section of a tendon less than complete severance fails to produce a sufficient result, while a complete section results in an excess For example in a lateral heterophoria of 15° in each eye, not more than 8° or at most 10° can be obtained by partial section—an insufficient correction A complete section may result in 20° to 25° of effect—an over correction Under such conditions, the correction may be made quantitatively exact by first making the complete section and then at once advancing the tendon to the proper point, there tacking it down If we endeavor, as I think most of us do, to make our corrections in equal quantities on both eyes, this procedure will be found not infrequently useful, at times indeed indispensable

It will be seen that this, considered as a control procedure, differs radically from that often employed, in that the large conjunctival wound and the conjunctival suture are here discarded

1807 Chestnut Street

THE INDICATIONS FOR, AND THE ADVANTAGES AND TECHNIQUE OF, MUSCLE SHORTENING

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY G C SAVAGE, M D
PROFESSOR OF OPHTHALMOLOGY IN MEDICAL DEPARTMENT OF VANDERBILT UNIVERSITY, NASHVILLE, TENN

In the judgment of the author of this paper, muscle shortening is indicated in all cases of heterotropia, regardless of the direction or extent of the turning In many cases of low degrees of squint the shortening operation alone will effect a cure, while, in a greater number of cases, the shortening of the weaker muscle should be associated with a partial division of the tendon of the stronger muscle in order to the attainment of the best results In cases of high degree of exophoria in which a partial tenotomy of both external recti does not reduce the exophoria within the range of possibility of completing the cure by rhythmic exercise of the interni, the latter should be shortened In all cases of exophoria with less than 8° of abduction, shortening of the interni is indicated, not to be associated with even the slightest tenotomy of the externi In high degrees of esophoria not reduced by a partial tenotomy of the interni within the limit of possibility of completing the work by exercising the externi, the latter should be shortened, while in the lower degrees of esophoria, the only operation indicated is the shortening of the externi In any case of hyperphoria not reduced to 2° or less by a partial tenotomy of the superior rectus of the hyperphoric eye, the inferior rectus of that eye should be shortened In all cases where shortening is indicated, except in hypertropia and hyperphoria, the operative effect should be equally divided between the corresponding muscles of the two eyes The superior and inferior recti of a cataphoric eye should be operated on rarely if ever Since the shortening of the recti muscles, associated with partial tenotomies of the opposing muscles can effect so much, a complete tenotomy of an ocular muscle can not be often indicated

THE ADVANTAGES OF SHORTENING a muscle, over the older method of muscle advancement, may be set forth in a few words the former is more easily done, and is the safer of the two operations, in that torsion of the eye is not so likely to occur as a result of setting the tendon too high or too low, in case the externi or interni are the muscles involved, or too far out, or in, when the superior and inferior recti are the muscles in question Should the knot come untied in the shortening operation, the patient's condition will not be worse after the operation than before, which can not always be said when the same thing happens in the attempt to advance a muscle An apparent objection to the shortening operation is the knuckle of the muscle formed by the folding, but this disappears by absorption within a few weeks

THE TECHNIQUE OF MUSCLE SHORTENING

was simple when first introduced, but has grown in simplicity as a result of a modification suggested and practiced by Dr Tenney, of Boston The original operation was performed as follows the eye was cocainized, the lids were separated by a stop speculum, the conjunctiva was seized with fixation forceps a little behind the insertion of the muscle tendon, and two cuts with scissors were made, one vertical the entire width of the tendon and a little behind the insertion, the other below and parallel with the lower border of the tendon and muscle The included portion of the conjunctiva was then dissected up and held out of the way A puncture of the capsule of Tenon was next made, at the lower border of the tendon near its insertion, and another puncture at a corresponding point at upper border of the tendon, through which a strabismus hook was passed beneath the tendon, with which to control the eye A silk thread was then armed with two needles, one of which was passed through the upper part of the muscle and capsule from without in, at a chosen distance behind the insertion, and, similarly, the other needle was passed through the lower part of the muscle and capsule at a point immediately in line with the first Drawing on the two ends, a loop of thread was brought in contact with the capsule over the muscle The passage of these needles was facilitated by lifting the respective borders of the muscle with fixation forceps The next step of the operation was to lift the tendon by means of the hook and pass, first one needle and then the other, through the tendon from within out, at points one-eighth of an inch apart, bringing these needles out through the conjunctiva, a little in advance of the tendon insertion The two needles were now removed and, by means of the surgeon's knot, the part of the muscle beneath the loop of thread was drawn up to the insertion of the tendon, thus shortening the muscle to a corresponding extent The flap of conjunctiva was now allowed to fall down over the knuckle of muscle The stitch thus taken was allowed to remain from four to six days, at the end of which time the muscle was firmly fixed, by adhesive inflammation, in its new relation

The modification suggested by Dr Tenney, in a personal letter, I at once adopted As thus modified the operation is done as follows a horizontal cut is made with scissors through the conjunctiva and capsule of Tenon, beneath the lower border of the muscle from the insertion of the tendon backward, to the extent of the shortening desired Through this cut two strabismus hooks are passed,—one beneath the tendon at its insertion, the other beneath the muscle By means of these hooks the muscle is lifted from the sclera A needle is now passed through the conjunctiva and the upper border of the tendon at its insertion and is carried back beneath the muscle to a point chosen just in advance of the second hook, where it is made to penetrate the muscle near its upper border and the superposed capsule and conjunctiva The needle is then made to reenter the puncture in the conjunctiva made by it in its exit, is directed downward between the conjunctiva and the capsule and is brought out through the incision in the conjunctiva Then the lower border of the muscle and capsule are seized with forceps and this needle is made to penetrate them from without in, and is again brought out through the horizontal incision The needle is now passed through the incision beneath the tendon which it is made to penetrate at the lower border of its insertion and is brought out through the conjunctiva at a point in line with, and one-eighth of an inch below, the primary puncture The two ends of the suture thus passed are now brought together by a surgeon's knot with enough force to bring the part of the muscle beneath the loop in contact with the tendon The suture is allowed to remain from four to six days

The suture plate, recently introduced by Dr Chalmer Prentice, of Chicago, as modified and improved by Dr George H Price, will most likely be of much service in this operation, if for no other reason than that it will greatly facilitate the removal of the suture The *improved plate is made of aluminum, is five sixteenths of an inch long and one eighth of an inch wide, oval in shape* In this plate there are two holes one-eighth of an inch apart, through which the two ends of the suture are passed In tying the suture, the plate, which has such a concavity as to fit the curvature of the eye, is brought in contact with the eye, and the knot is tied over it between the two holes There is a transverse groove near one hole along which one blade of the scissors is passed when the suture is to be removed

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SLIGHT EFFECTS OF TENOTOMIES OF THE OCULAR MUSCLES, AND WHAT ARE THE INDICATIONS AND ADVANTAGES OF TENDON CONTRACTIONS?

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY GEORGE T STEVENS, M D
NEW YORK

1 *Technique of Tenotomies*—I have placed my views so clearly on record respecting the general technique of tenotomies that it does not seem necessary to repeat what I have said There remain for discussion these two questions

1 Why are slight effects produced as the result of free tenotomies of the ocular muscles?

2 What are the indications and advantages for muscle shortening?

In regard to the first question, the slight effects sometimes resulting from free tenotomies, I shall venture the assertion that a tenotomy uniformly produces all the effect which we have a right to expect from it If we hope to produce a definite effect, by operating on a muscle which is not the chief element in the condition for which we operate, we may expect disappointment In other words, we shall not get the effect for which we hope, if we operate on the wrong muscle

It is necessary always to take into consideration all the reasons all the conditions which enter into the anomaly for which the operation is to be done All cases of esophoria, for example, do not of necessity depend upon any anomalous relations of the external and internal recti muscles We may have, and indeed we do have, many cases of deviation or of deviating tendency of the visual lines inward which depend, not upon a false relation of the lateral muscles but upon too great tension of the vertically acting muscle As to exophoria, I suspect that, as an essential and original condition, it is of much less frequent occurrence than is generally supposed Indeed to an important but not to the full extent, I may express my present view on this subject by repeating what I said in a paper on exophoria in 1889 (*Archives of Ophthalmology*, xviii, pp 4, 373), and in which I called attention to the fact that free tenotomies of the externi often produce less pronounced effects than might be supposed I there gave as a reason, "that exophoria is not infrequently the expression of hyperphoria is a fact that can not escape the notice of the careful observer"

In the same paper, a thought which had more strongly impressed itself upon my mind than I was then ready to fully express, was stated as follows

"When the relative physiologic power of the externi and interni are considered, we may well question whether exophor a is often a congenital defect" I did not then think that the available facts warranted any assertion, nor am I at present ready absolutely to exclude exophoria from congenital anomalies, but I feel warranted in saying that it is in every case safe to assume that it is an acquired condition, although careful consideration may at length lead us to adopt the view that a given case is an original and essential anomaly

I have shown in papers which have been published from time to time during several years, how converging strabismus may often be relieved by proper relaxations of the overacting superior or inferior recti, and one who gives the subject careful study will be surprised to find how large a number of squinting people, squint in or out, not because of an excessive or of an insufficient normal tension of the lateral muscles

I present here the photographs of two patients, each with marked converging strabismus, also a photograph of each of these patients in which it is plain to see that, whatever other anomalous condition may exist, or whether the best or the worst way has been adopted, neither of which questions is raised in this connection, a notable change has occurred in regard to the converging squint In fact, it has been abolished, and yet in neither of these cases has there been the slightest interference with the lateral muscles, but in each case there has been a relaxation of both superior recti

Now, let us suppose that in either of these cases a tenotomy of the internus had been done (as had been strongly urged by distinguished surgeons in both cases), is it not plain that a positive injury would have been done? But is it not also plain, and this is the bearing of these cases upon this question of free tenotomies and small results, that if these eyes were caused to swing in, by virtue of the action of the vertically acting muscles no tenotomy of an internus, short of turning the balance of the eyes distinctly outward, would have served to prevent the inward squint? After such a so called "correction," comes, very naturally, the gradual divergence so often seen after squint operations

But there is in all this an element of great importance which has been generally overlooked, although I have called attention to it more than once This free tenotomy which has caused so little apparent change in the appearance of the eyes when directed straight forward, has caused a marked, and generally an unfortunate disability of the eye to rotate in the direction of the free tenotomy

Time, in this discussion, will not permit me to go into detail in regard to these conditions, but I may in a few words call your attention to some important truths

An unfavorable direction of the eyes with regard to the horizontal plane, in which by virtue of a preponderating action of the upward or downward drawing muscles of one or both eyes, equally or unequally, an excessive effort is demanded on the part of the opposing muscles, predisposes to a drifting in or out of the visual lines according to circumstances If the disproportionate tension of the vertically acting muscles is exactly equal, esophoria or esotropia usually results If there is excessive and unequal vertical tension, exophoria or exotropia often results

This being the case, it becomes a matter of the first importance that we determine not only the absolute but *comparative rotations of the eyes, not only* from side to side, but up and down

We have had until quite recently no sufficient means for determining these rotations The judgment which we may form by watching the rotations is not to be relied upon The perimeter is destitute of any considerable value for this purpose

The instrument which I show you here and which I call a tropometre, serves in this respect a valuable purpose It consists essentially of a telescope in which the inverted image of the examined eye is found at the eye piece, where either as an aerial image, or as an image upon a ground glass, its movements can be accurately observed A graduated scale in the eye piece permits every movement of rotation in every direction to be exactly measured For the purpose of convenience in being near the patient and of presenting no obstruction to the light which should fall upon the examined eye, a right-angled prism or an obliquely placed mirror is adjusted at the distant end of the telescope, permitting the examination from the side instead of from the front

Now, if we study the vertical actions of the eye muscles in connection with the lateral we shall find that we have rarely, indeed, I think I shall not be betrayed into an exaggeration if I say that we have *never* to make very free tenotomies in any direction, for even in cases of extreme squint inward or outward, when we have accomplished the *first stage of* correction, which should be that of establishing equal and proper rotations up and down, there will remain *so little to do that a complete* tenotomy of an internal or external rectus muscle can never be required In short, if we attend to *all* the elements which enter into the production of a lateral squint, instead of directing our attention exclusively to one muscle, and that generally the wrong one, we shall never have occasion for great operations

Now let us turn our attention to the question of indications and advantages of tendon advancement

The question turns first upon the purpose for which the operation is to be done If it is for the purpose only of "straightening a cross eye," which is the purpose so often, then I have no interest in its discussion It makes little difference how it is done It is a subject belonging neither to science nor to high art

But if it is done with the definite and intelligent purpose of establishing binocular vision *at all normal points and under all normal circumstances*, we have a question of the highest scientific value and calling into service some most delicate and beautiful principles

Many years ago I advised, when there appeared a necessity of making a very free tenotomy, to divide the effect between a moderate contraction of one muscle and a moderate tenotomy of its opponent, doing each upon both eyes, thus leaving the tension of the two opposing muscles as nearly as possible equal in sum to the original tension but with the amount so divided as to bring about the desired effect Superficially this appeared to be good logic and sound practice As a matter of fact, it was neither the one nor the other

We must recur to the principles which I have already discussed in regard to tenotomies We must first ascertain exactly why an eye deviates in this or that direction, and then, if surgical operations are required, we should inquire whether the tensions are too great or too small And, exactly here, upon the answer to this question, should the selection of a method be determined How are we to know? Does the fact that, for example, in converging strabismus the eye rotates too far in and not far enough out, tell us what to do?

I know of but one method of solving the question absolutely We may do this by the tropometre

Let us, for illustration, assume that the temporal rotation should normally be 45° and the nasal 50° of an arc This would give us the sum of a normal rotation in the lateral directions of 95° Then, suppose that the upward rotation should be 40°, and the downward rotation 48°, the sum would be 88° Now, should we find in a given case that the sum of these rotations should largely exceed the amounts given, it would be an indication for tendon shortening I have found the percentage of these cases very small The eyes of such people are usually, if not always, very prominent—almost goggled The movements can be seen to expose large tracts of conjunctiva and the eyes swing in or out, according to the conditions of fixation

By far the greatest number of those who have lateral deviations show no such excess of rotations They are in the great majority restricted to three fourths or even two-thirds of the normal rotations To tie up such muscles and to increase the already excessive tension may be to improve the appearance of a patient, it certainly adds nothing in a rational way to an actual correction of the disabilities of rotation I do not question the claim that eyes may be brought into closer relations in certain directions by such forcing, but I greatly question the wisdom of the method

We may then sum up an answer to the questions which have been presented in a few words

Free tenotomies have slight apparent effect when the muscle operated on is not the muscle at fault, and tendon contractions are advantageous only when they are directed against a condition of muscles positively shown to be loose, not by the failure of the eye to rotate in a single direction, but by a marked excess in the sum of rotations in opposite directions

To draw a useful lesson from these few suggestions, I would say that a case of strabismus convergens or divergens is to be studied from the standpoint of the tensions of all the eye muscles, and that a very large proportion of these, and especially those of high degree, are the manifestations principally of vertical tensions

If the rotation upward of the eyes, as shown by the tropometre is materially less than 40° or 45°, while the downward rotation materially exceeds 50° or 55°, no correction for the lateral deviation should be made until the rotation upward equals 40° and hyperphoria is absent Or, if the upward rotation is excessive in comparison to the downward, an analogous correction is first to be made before an internal or an external rectus is cut

If the rotations in all directions are evidently too great, indicating an absence of proper muscular tension, tendon shortening may be resorted to, which will be very rarely If the sum of the rotations is not excessive, tenotomies only are called for

33 W 33d Street

TO WHAT EXTENT SHOULD RECENTLY SUGGESTED SYSTEMS OF MUSCULAR EXERCISE DISPLACE TENOTOMY IN THE TREATMENT OF HETEROPHORIA?

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md , May 7-10 1895

BY HIRAM WOODS, M D
BALTIMORE

One's conception of the physiologic importance of an abnormality necessarily enters into his estimation of therapeutic measures The wide difference of opinion upon the importance of heterophoria makes it advisable to state one's position before reviewing therapeusis Briefly, I think heterophoria, like refraction errors, often is comfortably borne Further, I am in accord with Dr Duane[1] that we must find what heterophoria means "Whether it is a spasm or paresis, accommodative strain or anatomic conditions that are the cause of the heterophoria" In some one of his papers Dr Stevens has said that the surgical correction of a functional abnormality is a matter of grave responsibility In a word, the whole matter is a question of diagnosis, and a mistake may be very serious Exophoria is not always weakness of the interni The same is true of faulty tendencies in other muscles Free tenotomies sometimes produce slight effects, and careful tenotomies sometimes produce disastrous and great effects The surgeon who escapes such an experience is to be envied In 1893, Dr Savage[2] gave out his "Rhythmical Exercise" At the Pan-American Congress in September of the same year, Dr Gould told us we had "all been on a surgical debauche," and followed his indictment with his treatment based upon the theory of "Innervational Abnormalism"[3] It was interesting to note the avidity with which these measures were seized upon where these distinguished writers have established influence From the South and West came cures by rhythmic exercise when everything else had failed

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[1] Annals of Ophth and Otol July, 1894
[2] Ophth Record, May, 1893
[3] Medical News, Nov 18, 1893, and Annals Ophth and Otol Jan 1894

Around this neighborhood, "handicapping by prisms" reigned supreme The meaning of it all was that there is a widespread conviction that tenotomy is not always a safe remedy for heterophoria, nor the balance test the whole diagnosis Personally, both measures appealed to me as rational I have never felt that it was in accord with scientific work to restore muscular balance by weakening the stronger muscle To bring the weak to the physiologic standard of the strong seemed the correct procedure This is what these plans proposed to do Again, I had met cases where, with faulty tendency by equilibrium test, there was wanting what Dr de Schweinitz[4] gives as a necessity for tenotomy, "distinct preponderance of the opposing muscle" In looking for this preponderance, with esophoric balance, the variableness of adduction had led me to abandon it as a test I was satisfied that adduction was nothing more than positive relative range of convergence, and largely a matter of cultivation, moreover that it bore no constant relation to balance, for with high exophoria it was often high also This bit of observation, with the influence of certain writers, had led me into an error, which, I believe, is common I mean the extension to abduction of the same reasoning applied to adduction The latter is variable, can be easily increased in a variety of ways, and bears no constant relation to the distance equilibrium test It has a connection with accommodation of uncertain and variable nature None of these, it seems to me, are true of abduction It varies, if at all, within very narrow limits, it is rarely, and with difficulty, increased by any system of exercise with which I am familiar, it has no necessary physiologic nerve connection with another function, from which the patient must learn to divorce it, in a word, it forms, with distance equilibrium test, and associated refraction, the keystone of diagnosis It is, I believe, always low when esophoria means intrinsic weakness of the externi, always high when exophoria demands surgical treatment In either esophoria or exophoria, without low or high abduction, there is something else, and a tenotomy before this something is discovered is a hazardous undertaking

Answer to the title question must come through answer to another What does clinical experience teach can be accomplished by the two methods of exercise mentioned? and, farther, it is to be remembered that faulty lateral balance does not always mean intrinsic muscular weakness At the hands of Drs Duane[1] and Eaton,[5] Dr Gould's plan has undergone investigation from the standpoints of originality, physiologic correctness of nomenclature and usefulness Each of these writers thinks that the method is an adduction developer, a promoter of positive relative convergence Of this there can not be the slightest doubt Adduction can be doubled or tripled often in five minutes So far, then, as defective adduction causes exophoria, it is a remedy for exophoria In its clinical use I note 1, adduction when low can be developed most rapidly when associated with low or normal abduction (3° to 8°) This condition is not true interni weakness, although the balance test is usually exophoric It is only inability, from causes little understood, to separate convergence from accommodation 2, defective relative range of convergence may cause asthenopia By way of illustration

Case 1—Student 21 years old Asthenopia on near work Refractive condition Hm+1 D, Ht under homatropin, +1 5 Muscles, at 20′, exophoria 1°, Ab 3° Ad 10° Near exophoria 10° with naked eye 14° with *Hm corrected* Gould's method raised adduction to 24° in five minutes Allowing a normal excess of exophoria for the near over the distance balance of 2°, there was left a near exophoria of 11 prism degrees, or 3 meter angles This was 1 5 m a for each eye In other words, the muscular error for the near, corresponded exactly to the accommodation in dioptres for distant vision Hm (1 D) was ordered for constant use, and Gould's method continued for a few days Adduction was easily developed to 30° and stayed there Behind the glasses near exophoria fell in three weeks to 8°

I noted this same condition in another case a medical student 23 years old He had Hm+0 5 D, Ht +1 25 Muscles, at 20′, exophoria 1°, Ab 4°, Ad 14° Near exophoria 11° Prolonged work was an impossibility The calculation for meter angles shows nearly the same relation to H as in Case 1 Gould's method made adduction 30° in a few minutes It was continued for a few days, and the *Hm* was corrected Behind these glasses, near exophoria fell to normal in three weeks

Three possible causes of the asthenopia suggest themselves 1, hyperopia Uncomplicated hyperopia of 1 5 D total in healthy young men, with p p acc of 6 or 6 5 cm is not apt to produce asthenopia 2, the low abduction Convex spherical glasses are often of great service in weakness of the externi In such cases, however, there is usually low exophoric balance at 20′, with either the same or orthophoria in the near High near exophoria is not a symptom of this condition 3, defective relative convergence The usual near balance is 2° to 5° in the direction of exophoria, compared to distance balance Dr Noyes[6] thinks this is not abnormal Dr Theobald[7] had developed from it a useful method of diagnosing accommodative asthenopia in young persons In each of the above cases the excess of near exophoria, over this normal, equalled the difference between A and C imposed by refraction error Under exercise which broke up the hard and fast artificial connection between A and C, symptoms disappeared, and near exophoria gradually lessened behind *convex* glasses, just the opposite of what is usual The conclusion seems justifiable that defective positive relative convergence was the cause of asthenopia I have treated similar cases with abducting prisms for near work Such a course is often successful, but it only treats a symptom Gould's method breaks up the cause of asthenopia, and refraction correction prevents its return

A third note I make for the clinical use of Gould's method is that in exophoria, with high abduction, development of adduction, without attacking the overstrong externi, sometimes relieves In the case of a man 21 years of age, without refraction error, and with asthenopia, I found exophoria at 20′ of 1° to 3°, Ab 10°, Ad 12° Near exophoria 9° It took several days to develop adduction to 30°, but then a cure was effected Exercise was continued for several weeks Apparently this was a case where the intrinsic muscular error, overstrong externi—was easily carried as soon as the interni were taught to work In favor of this method, the above is all I can say In esophoria it has failed me utterly Abduction has not increased In one case of hyperphoria it seemed to do good, but it is distinctly inferior to Savage's rhythmic exercise In exophoria with high abduction, it has only exceptionally relieved asthenopia, though it developed adduction from 10° or 15° to 50° or 60° The trouble was excessive external contraction In several such cases I have had to order abducting prisms or do external tenotomy Still, the method was useful as a diagnostic means, to throw the responsibility on the strong externus, and acquit deficient adduction Some one I think advocated its use after external tenotomy This seems rational

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[4] Diseases of the Eye, p 544

[5] JOURNAL AMERICAN MEDICAL ASSOCIATION, Sept 1, 1894

[6] Diseases of the Eye Edition 1890 p 195

[7] Transactions Am Ophth Soc 1891

Savage's rhythmic exercise has not received, in this part of the country, the attention it merits It is, as Eaton[5] has said, a physiologic method of strengthening muscles I have had considerable experience with it, using for esophoria prisms from 3° to 5°, and for hyperphoria from 1° to 2 5° These are a little stronger than originally advised by Savage I value it highly in these classes of cases 1, in hyperphoria, usually of low degree, where supra- and infra-duction are not far apart, for instance 2° to 2¼°, 1° and 1 5°, etc This form of muscular error, is I believe, quite a common source of asthenopia For my own part, I want a bigger margin than 3-4° when cutting a vertical muscle 2, in low esophoria, with abduction of 2 5° to 4°, unrelieved by refraction correction, it has in a few cases developed abduction a little It is, however, confessedly slow and such cases do better, it seems to me, with adducting prisms 3, when opposite muscles are deficient in contractile power, irrespective of balance test, for instance, a condition like this, esophoria 2° with Ab 4°, Ad 12°, developing hardly at all by Gould's method, and no light thrown on the matter by near test Such cases are not frequent but they occur, and are due to general muscular asthenia

Rhythmic exercise seems to me the only rational treatment we have In the case from which the above measurements were taken, it gave excellent results As a developer of adduction it is slower than Gould's method

To answer the title question, I would conclude that 1, Savage's rhythmic exercise should displace tenotomy in the treatment of low hyperphoria, when supra- and infra duction are not over 1° to 1 5° apart, 2, when, irrespective of balance, all the muscles are wanting in contractile power, 3, when a weak externus, with only 3° or 4° abduction, (5° being regarded as the normal minimum) seems to cause trouble, and there are wanting the conditions which make internal tenotomy justifiable

I would conclude that Gould's method will 1, almost certainly give relief in the considerable class of cases where exophoria and low adduction exist without high abduction, 2, that even when exophoria is associated with high abduction, adduction should be developed by Gould's method before operating, to determine whether it is excessive externus or defective internus action that is causing asthenopia

In esophoria with low abduction, or hyperphoria with a difference in vertical duction of 3° or more, refraction correction or prisms, bases toward the weak muscles, having failed to relieve, operation is as a rule necessary The ideal treatment for heterophoria, due to intrinsic muscular weakness, is a system of exercise which can be depended upon to develop very weak muscles to the strength of their antagonists It has not yet been discovered, so far as I know

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ELECTRO-VIBRATION OF THE TURBINATED TISSUE

Read in the Section on Laryngology and Otology, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore, Md May 7 10, 1895

BY J MOUNT BLEYER, M D, F R A M S

Member of the Royal Academy of Medicine of Naples, Italy Corresponding Member to the Academy of Medicine of Mexico, Corresponding Member De La Société D' Electrotherapie, France Member American Medical Association Surgeon to the New York Throat and Nose Hospital Surgeon to the German West Side Clinic Medical Editor Electrical Review Electrical Society, New York City, etc

NEW YORK

In this paper I shall attempt to present the useful purpose of faradism, as observed by me, in treating this form of disease involving certain conditions of the turbinated tissues, which from time to time we have been treating according to the prevailing fashion of the moment, now medically, then again by the more radical means of surgery, the cautery, the saw, the snare, involving a tissue destruction to which, in some instances I have been for a long time opposed, and which I also availed myself of in the hope that some day I would hit upon a better plan of procedure, more physiological and less often accompanied with results ranging from beneficial to positively bad, if not, to say the least, lastingly harmful

I believe, from the results of two hundred cases treated by the method as I shall describe without going into the details of each individual case, I have found a method for the treatment of simple hypertrophied turbinated tissue that is far better than either the medication treatment or surgery, or both combined It is faradic massage

The time has come when those of us who have given years to the careful study of the curative power of electricity must plead for tolerance among our colleagues, and an impartial hearing Electricity has many uses, and I am sorry to say many abuses, which in no few instances come from so called specialists, ranking high as leaders in the slowly growing science of electro-therapeutics

Electricity is like copaiba in emphysema, a good remedy in bad company

The good account faradism has rendered of itself in this instance is due to the fact that we have studied and carefully observed its physiologic action and have just begun to bring it under the control to which all remedies are subject, that of intelligent dosage This has been rendered possible by the recent improvement in faradic machinery

By means of induced currents (faradic electricity or interrupted current) very powerful currents can be obtained, but currents which only last a short period of time If we wish to apply the induced currents therapeutically or for experimental purposes, we must find means of generating them in quick succession An apparatus for this use is called induction apparatus or a faradic battery To be more explicit the essential parts of an induction current machine are spirals with iron cores, which are moved quickly past magnetic poles An ordinary faradic apparatus would then consist of a primary coil, having an iron core, and a secondary coil which is wound over the primary coil Through the primary coil a galvanic current is passed, the make and break of which follow rapidly upon each other In order to produce this phenomena which is necessary for the rapid interruptions of the current in the primary coil, an automatic circuit break is provided This may be simply a vibrating armature of an electro magnet, alternately energized and de-energized, which armature in vibrating alternately makes and breaks the primary circuit Such arrangements are usually in small induction coils

The three illustrations below inserted explain the principal points regarding the construction and physics of an induction machine (Fig 1)

1 Illustrates a galvanic current which sweeps around the primary coil C ′ while (*a*) converts the core into a magnet, N S and (*b*) induces a momentary reverse current in the secondary coil C ′′

2 The sudden magnetizing of the coil itself induces a reverse current in the secondary coil, which strengthens the galvanic induced current within this circuit

3 The magnetized coil attracts the soft iron head of the spring to itself, and so breaks the current flow

4 This stopping of the current flow stops the magnetizing influence upon the core, and a direct current is induced in the secondary coil by the breaking of the primary current, strengthened by that induced by the de magnetization of the core

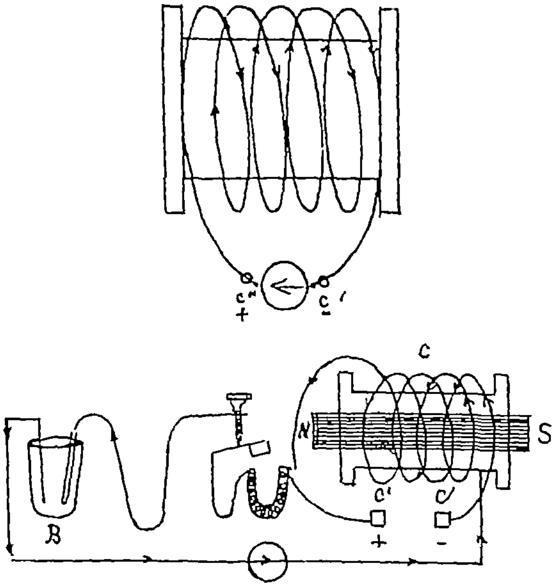

Fig 1 —Faradic Apparatus, showing its Outlines and Principle of Construction

5 The magnetic force holding the hammer being removed, it returns by another current, passes, and by these vibrations the process is repeated in such rapidity as the strength of spring and magnet admits

Definition of Induction —What is induction? What are induction coils? By common consent this term is employed as a name for an apparatus invented by Munson and Neef and subsequently by M Ruhmkoff, consisting of a bobbin wound with a short coil of stout wire, over which is wound a secondary coil of very fine wire of many thousand turns, well insulated from each other, the whole fitted with a central core of iron The name is not happily chosen It should have been inductive coils, since the word “ inductive” means “ leading, persuasive, producing,” and the use of these coils is to produce a high tension electric current from one having a low tension The term inducing coils, would have been still more correct since inducing is part of the verb induce, a word meaning, “ to influence, to persuade, to actuate, to impel, to allure ” The appropriateness of these terms to the electrical instrument under consideration will be seen as we proceed in explaining the principle of their construction, and their mode of action The word “ induction” on the other hand, comes from the verb “ induct” which means “ to introduce, to bring in, to put in possession,” none of which apply appropriately to the action of the inducing or inductive coil Now scientists have given different definitions for the term “ induction,” but most of them are not clearly defined Perhaps it will be more easily understood if put in the following words

THEORY OF INDUCTION

Every theory respecting induction is based on the assumption that there existed two electricities, one positive and the other negative, both of which were fluids The fluid theory has been abandoned by electricians, because modern observations of electrical effects have rendered the theory no longer tenable The other theories of two electricities, that is, two kinds of the same thing, such as positive and negative, answering to the terms male and female, is also fast passing away We still speak and write of electricity as being positive and negative, but we use these terms most to distinguish the backward or forward movement of the current, than to employ the existence of two separate and different forms of energy Some of the newest theories respecting induced currents of electricity are based on the assumption that all bodies are enveloped in a fluid, to which the name of ether has been given The electric current, in passing through a conductor, disturbs the arrangement of its component parts and these in turn are said to disturb the ether, which then transmits the disturbance to contiguous bodies Whether this theory is based on fact or on fancy we can not here determine, but the fact remains that there is such a disturbance set up in bodies near to electric conductors, and these are especially observable at the instant when the current of electricity is interrupted, as when the electric circuit is broken The observed effects go to show that the interruption causes a kind of eddy or back-wash in the current, which is felt by other bodies susceptible to its influence and observed in them as a current flowing in an opposite direction to that of the inducing current The inducing effects are more strongly shown in conductors actually in contact with the insulating substance, but they are also observed in conductors separated by air spaces only from the inducing conductors This goes to show that either the air or some similar invisible conducting medium transmits the inducing effects of one conductor to another conductor

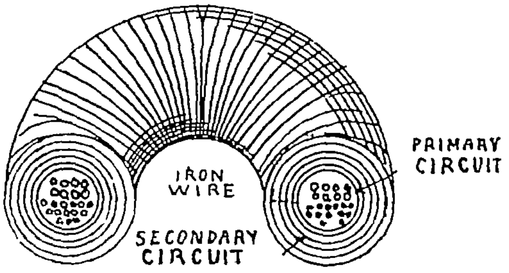

Fig 2 —Section of ring shaped Secondary Generator or Coil

PRINCIPLES OF INDUCTION

Before we proceed further in the study of the induction or inductivity, it will be advisable to notice a few of the principal facts or laws governing its action These, when well understood, will guide us regarding the construction of coils and the faradic machine, or induced current apparatus

The inducing conductor and the conductor to be induced must run parallel, side by side The inductive effect is weakened when they cross each other, and may be neutralized by a transverse position The bare conductors must not touch each other, but must be separated by an insulating medium If two conductors are in contact at any part of the circuit, or are insufficiently insulated, they combine in forming one conductor conveying the primary current in one direction only, and consequently there will be little or no inductive effect observed The turns of the conducting wires of a coil should not only be wound regularly, side by side, to get the best effects, but should also lie close to each other, separated only by the thin insulating medium

Since each turn exerts an inductive influence on its neighbor, and this influence is weakened by over-insulation and want of continuity, it will be seen further on, when we consider the relative values of insulating mediums, that the best of these are conductors of electricity, when the tension or pressure of the current is sufficiently high to overcome their resistance Therefore in planning the insulation of the wires and the parts of a coil, regard must be had to the tension of the current employed in working it, for if we employ a current of higher tension on an imperfectly insulated or badly arranged coil, with a view to obtaining better effects from it, the extra current forced through the coil will overcome the resistance of the insulation and break it down

Whenever this occurs in a coil, the inductive effects cease because all the imperfectly insulated turns are absorbed

The inductive effects of a current are observed, at least these manifestations

1 When the insulated conductor is wound as a wire around a mass of soft non-magnetic iron, the current of electricity passing through this conductor induces magnetism in the iron and converts it into a magnet while the current is passing The effect here manifested as magnetism only exists while the current is passing through the conductor, and when the current is broken

2 When the insulated conductor is doubled on itself, or wound into a spiral or made into a coil with or without a core of soft iron, the inductive effect of one turn of wire on another is manifested at the terminal of the battery or other generator of electricity (when the circuit is broken) by a bright spark, which increases the brightness with the turns made by the wire A similar spark is observable at the terminals of a wire around or laid parallel to the conductor in the main circuit, when the necessary conditions are present This effect is only observed at the instant of breaking contact with the battery, or, in other words, on the instant of the rupture of the main circuit wire

3 When a wire is thus made into a long spiral with several coils close-to each other, and the bared metal parts near the battery terminal are held in the naked and moist hands of a person, that person will experience a tingling sensation in the nerves of the fingers at the instant when the current is broken and also when contact is made again with the battery This manifestation of induction is also only momentary, but can be repeated as often as contact is made or broken When a long coil of fine wire is wound on and over the main coil, the tingling sensation can be felt at the terminal of the second coil when contact is made or broken at the terminal of the first coil

There are, therefore, three distinct manifestations of electric current induction, or the inductive effect of the electric current observable, viz , the magnetic, the calorific and the physiologic All these three effects can be found, described, and its experiments shown in detail in all works on physics

SOME OF THE PHYSIOLOGIC ACTIONS OF INDUCED CURRENTS

The duration of induced currents has marked influence upon their physiologic effects The constant current of a battery only affects our system when a great many elements are used, and the weaker constant currents only affect very sensitive parts, our nervous system, however, is very sensitive to rapid electric changes The induction current, therefore, produces far more powerful shocks than the primary current, because the duration of the former is far shorter than the duration of the latter The difference of duration in induced currents when massive cores or bundles of wire are introduced in the coil, explains the marked difference in their physiologic effect By introducing solid matter, the duration of the induced current is increased, by introducing a bundle consisting of many fine wires, the duration of the induced current is lessened, therefore the physiologic effect is far more powerful, this has been proved to us by Magnus beyond a doubt, and bears important relation to the action of such an induced current in its physiologic action The effects which are produced in general in any given cases under treatment by electricity are stimulating and tonic effects, general and local, these belong to both galvanism and faradism, but especially to the latter, which acts as a stimulus, partly upon the contractile tissues, both directly and through their motor nerves, partly by its sensory nerves and partly in a reflex manner through the vasomotor system, producing increased vascular activity in the parts which it reaches These effects are, to a certain extent, shared by other modes of stimulation, as for instance, by massage, by treatment with hot and cold douches followed by friction with a rough towel, etc , but electricity has certain advantages over these active modes of stimulation, especially in all paralytic affections, from its greater power of inducing muscular tissue construction, and by its vibratory and stimulating action upon the nerve filaments for quite a distance of their length, and from the ease with which it can be directed to any required parts or centers in the body

The effect which peripheral stimulation exerts upon the central organs plays an important part in electrical treatment and affords the best explanation of the benefits which follow, even in cases where the treatment has been applied to the peripheral parts only

THE DIRECT EFFECT UPON THE SENTIENT NERVES BY THE INDUCED CURRENT

The healthy sentient nerves, which are the nerves of sensation, are observed by the aid of the microscope to be arranged in their peripheric termination much like fine moss, or the pile of fine uncut silk velvet If this vibratory action of the induced currents is brought to bear upon the nerves in the nose, the sensation received by the membrane during the passage of the current is as if painfully scratched

The induced current in a given bearable quantity and intensity has a greater effect upon the sentient nerves, in proportion to the frequency of the interruption of the current, *up to a certain degree*—which, for instance, may be about all the nerves can bear, but if the vibrator on any machine is screwed up a trifle, so as to make the interruptions extremely fine and rapid, then the current is more easily borne, and not only so, but it then becomes almost or quite pleasant But I am of the belief there is in this case more indirect effect, i e, reflex action, because this current more nearly resembles the continuous galvanic current A pretty rapidly interrupted current has more effect on the sentient nerves than very slowly interrupted currents, because it is the law of their action to feel or retain the effects of an impression for some little time after being acted upon So where a sentient nerve that is in health is subjected to the action of a single blow of an induction current, if of low tension, there is almost no sensation, but if these blows or shocks are then repeated faster and faster, the sensation will likewise increase, because the sentient nerve is not now in its normal state, i e, when it receives the second and third and succeeding shocks, but is in an excited condition

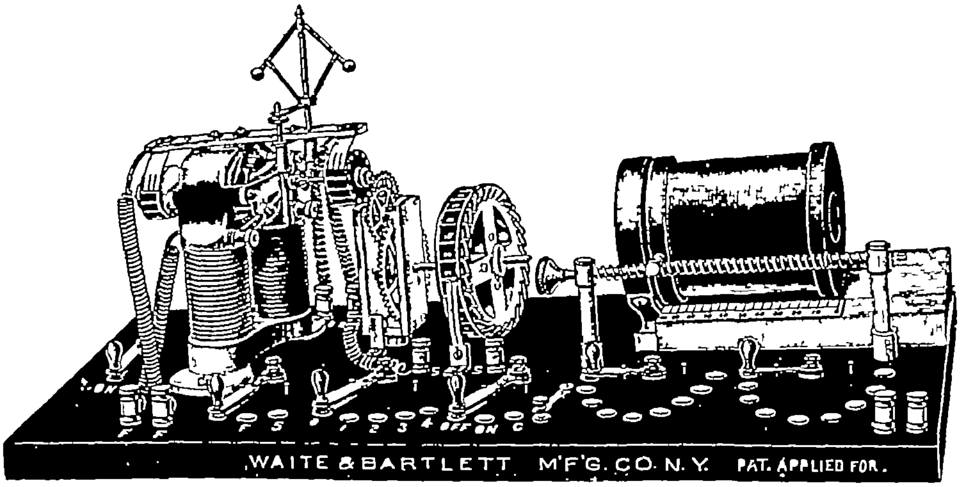

Fig 3—Engelmann's New Faradic Machine, with Variable and Controllable Interrupter and Alternator, of High Tension

There is no doubt that the rate of vibration is one of the most important factors in determining the therapeutic effect of the induction current, and not merely as it was formerly treated, a mechanical necessity for the production of such currents, and a very secondary part in the apparatus, as it has always been and still is in all faradic instruments However, regularity of vibration or interruption is essential to a serviceable therapeutic current and to obtain this we must not only have an interrupted action with far greater regularity than the old-time vibrator as ordinarily constructed, but, in addition, the vibrator must be controlled by a separate force entirely distinct from the coil current, as it is in the apparatus

The remarkable results of vibratory action have been sufficiently demonstrated of late, and the varying effects of such vibration of various mediums upon different nerves are] the subject of physiologic and therapeutic experiment. The more varying the effect of different rates of vibration, the more important is their perfect control The increased rapidity of interruption and the ability to control it gives a wide scope to the efficiency of the current, increases its sedative power, and renders the application of effective currents possible to the most sensitive tissues, certain results, especially decided vasomotor effects, being produced by rapid interrupted currents which are no longer perceptible to the sensory nerves

Dr Engelmann and myself have placed two new appliances constructed on similar principles, mine having some other advantages which will hereafter receive extra description, capable of giving us high rates of interruption, together with a perfect control of those interruptions Vibrations from 1 to 100,000 per minute are obtainable I am also of the same belief with Dr Engelmann that 50,000 interruptions to the minute is ample for all therapeutic uses in connection with the primary and secondary coils as now used in practice By the use of these mechanical devices, the rapid interruptions which they give are a most valuable means placed in our hands We can employ strong efficient current without discomfort

Electro-vibratory massage is the art of applying an intermittent, induced or interrupted current—(faradic electricity) with a specified amount of makes and breaks—periods or interruptions by means of an electrode directly to the hypertrophic turbinated tissue within the nasal cavity, or other parts to be treated by this method As a contrast to electro-vibratory massage usually spoken of, is the act of applying intermittent pressure and strain to the muscles and other accessible tissues The means employed are rubbing, kneading and light pounding, combined ordinarily with more or less additional stimulation of the skin—as by the friction and slapping This manipulation furthers the removal of lymph from the parts, which is especially needful when the lymphatics flow is sluggish through lack of muscular exercise, it apparently quickens the blood circulation through the part and furnishes gentle vasomotor exercise, it acts possibly as a direct trophic stimulus to muscular and sustentacular tissues, by stretching the ligamentous structures it maintains or increases suppleness, in the abdomen it stimulates and aids peristalsis and as a general stimulation of sensory nerves it may affect favorably the nutrition of the central nervous system

In the foregoing part of this paper, under the heading of the physiologic actions of the induced current, I have rehearsed in detail the effects and therapeutic value

It has demonstrated itself to me in all cases that electro-vibration acts directly on the part undergoing the vibration It influences the circulation in the veins and lymphatics, and at the same time acts as an anesthetic where congestions are present, as in acute and chronic inflammations, which will at once make itself evident to the operator The gross physiologic action by applying these high rate vibrations to the turbinated tissues is simply hastening the absorption of the inflammatory processes, and thereby reducing the size of these bodies which occlude the meatuses

By this system which I have been practicing for ten months and applied in over two hundred cases, I can only say that results are most satisfactory to myself and to my patients A very important effect is noticed by the patient immediately after the first séance, that the turbinated bodies have been reduced and breathing is possible through the meatus which previous to the application was occluded The secretions are more abundant and the entire head has a feeling of clearness, which is due to the reduction of the tissue, emptying of blood vessels and lymphatics, and the effects of an impression left by the high speed interrupted current on the sentient nerves for some little but appreciable time after being acted upon Different sensations are felt by different individuals—as pinching, prickling and, most often experienced, a burning sensation as above described These are most of the physiologic and clinical facts connected with electro-vibration, which I tried to describe as graphically as possible

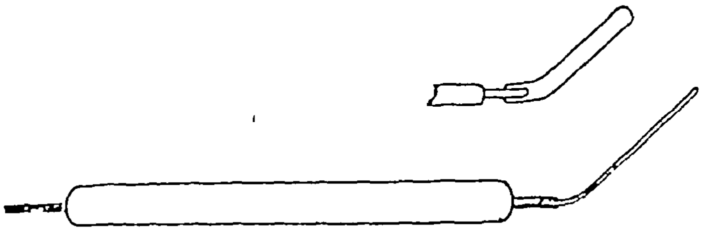

Fig 4 —Author's Electrodes for Electro-Vibration

Cases must be selected for the treatment by this method

THE PRACTICAL PROCEDURE OF ELECTRO-VIBRATORY MASSAGE

For example, let us take a hypertrophied inferior turbinated body of the left side of a patient, to operate on, the physician must be fitted out with a proper plant, viz , a first class induction machine, capable of giving no less than from 4,000 to 6,000 interruptions per minute or more I use generally 10,000 to 15,000, produced by the Engelmann or author's interrupter

Electrodes of different diameters and curves These are the chief instruments for the proper carrying out of this form of vibration The patient is seated before a reflecting mirror, with the head in a comfortable position A speculum must be used in order to apply the electrode over the body or tissue to be treated When the electrode is once placed over the hypertrophic turbinated body, the current is slowly graduated in strength, with the high speed of interruption at once Allow the electrode to remain in one position over the tissue treated for the entire séance Do not reintroduce the electrode without stopping your current, or your patient will receive a shock, which is to be avoided but start as you began, by turning on the graduated or tolerant current with its high speed frequencies, each sitting to last from twelve to fifteen minutes and repeated daily, for the first week, and every other day after that

If the patient is sensitive about the nasal cavities, a 5 per cent solution of cocain is advisable Regarding the time in which cures are effected, that varies according to the extent of the hypertrophy Some are cured in from ten to twenty sittings, or from six to eight sittings Every case must be individualized No set rules can be laid down

It is best to start on the inferior turbinated tissue first, in order to give room to the traveling of electrodes All obstructions to the entrance of the electrode must be removed previously Some patients will be found very sensitive in the beginning, to the induced current This is also noticeable with all other forms of massage employed in this cavity The current travels the sensitive distributed nasal nerves which can not be avoided You will often find in the beginning of the first few seconds of treatment, the patient wishes to have the electrode withdrawn, but soon submits and thinks no more of it Should much resistance on part of the patient exist, cocain will relieve all reflexes

After each sitting, a strong solution of alum dissolved in albolen, or some other compound of its kind, is applied to the massaged parts and well rubbed in by means of a probe wound with cotton In children, where the inferior turbinated tissue is found, as a rule, hypertrophied, electro-vibratory massage has given the best account of itself

There are no contra indications for the use of this method I have used it in all forms of disease about the pharynx and nasal passage and recommend the same to my colleagues

The electrode, of which a cut is here given, is one of the many used for the application of this treatment In some cases it is admirable to use soft material, as sponge and cotton, fixed into a conducting holder

460 Lexington Avenue

ELECTROLYSIS BY A CURRENT CONTROLLER FOR THE REDUCTION OF SPURS OF THE NASAL SEPTUM

Read in the Section on Laryngology and Otology at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md May 7-10, 1895

BY W E CASSELBERRY, M D
PROFESSOR OF THERAPEUTICS AND OF LARYNGOLOGY AND RHINOLOGY IN NORTHWESTERN UNIVERSITY MEDICAL SCHOOL (CHICAGO MEDICAL COLLEGE) LARYNGOLOGIST TO WESLEY HOSPITAL, ETC
CHICAGO

It is unnecessary to describe spurs or excrescences of the septum narium further than to say that they are outgrowths of cartilage or bone, or of both combined, which project from the septum into the lumen of the nostril, thereby causing obstruction to nasal respiration and drainage In size, contour and exact location they are of infinite variety and the symptoms which they produce vary correspondingly in nature and degree, being at times so grave as regards complete occlusion, deformity, pressure effects, and the induction of neuroses, as to demand removal by whatever means, and again occasioning merely a sense of inconvenience or annoyance Customarily, excrescences are removed by surgical means, by the knife, saw and drill, and these methods are still to be indorsed for the majority of cases In skillful hands they are more rapid, more precise, and in the case of large bony spurs, it would seem, more effective than is electrolysis But the surgical method is sanguinary, and while many patients bleed but little, a considerable number suffer from profuse and troublesome hemorrhage and there is no way of telling in advance which ones will bleed, or when they will bleed Such cases usually demand packing of the nostril, either at once by the operator or by any accessible physician, if the hemorrhage occur later, as during the following evening or night, and the packing if not done with antiseptic material can lead to infection of the middle ear and this in turn to suppuration in the mastoid process

It is true that both profuse hemorrhage and infection can be avoided with reasonable certainty by the insertion in all cases, immediately after the operation, of an antiseptic packing of iodoform gauze, or by the closed treatment of the nostril by the antiseptic method of Roe, either of which, however, subjects the patients to some inconvenience and annoyance and causes sensitive ones to interrupt business or seclude themselves for a day or two Neither the danger of possible hemorrhage nor the inconvenience of a tampon is comparable to the benefit conferred by the operation in a case of major degree, but they do seem disproportionate to the ends sought in many cases of minor degree For these reasons, others, as well as myself, have sought in electrolysis at least an occasional substitute for the knife

Concerning the physics of electrolysis, it is only necessary to state that it is a process of chemic dis integration of tissue under the influence of an electric current by which water and salts are separated into their component parts, oxygen and acids being attracted to the positive pole and hydrogen and the bases to the negative pole

A resumé of the previous literature of the application of electrolysis to the treatment of nasal spurs need be but brief, most of the publications have been in French, are recent, and have not been freely circulated in this country Miot[1], of Paris, was the originator in 1888, and following him Garel[2], of Lyons, reported his results in thirty cases, but my attention was first drawn to the method by Moure[3] at the Ninth International Medical Congress at Berlin in 1890, where he read an elaborate paper on the subject and described minutely the technique Moure and Bergonie[4] have since embodied their studies in a monograph published in Paris in 1892, and Moure[5] again in 1894, before the Eleventh International Medical Congress at Rome, discussed in a paper the "Comparison between Electrolysis and other Methods of Treatment for the Destruction of Deviations and Spurs of the Nasal Septum "

Moritz Schmidt in his book, *"Die Krankheiten der oberen Luftwege,"* published in 1894, confirms the efficacy of the method as advanced by the French operators, a significant fact which goes far toward removing the sense of skepticism with which the subject was first viewed in America Among others may be mentioned Peyrissac, Meyer and Heryng, all cited by Newcomb

Only two papers by American authors have come under my observation One by Newcomb[6] of New York, with a report of two cases and an excellent review of the bibliography and technique, the other by Ballenger[7] of Chicago, with a report of three cases

All of these operators have employed, as the source of the electricity, a primary galvanic battery of about 30 cells The supposed necessity for this troublesome and unreliable apparatus has prejudiced many against the electrolytic method Allowed to stand unused for a time, it is often found that the acid fumes have corroded the metallic parts and the battery fails to work, or the cups leak, or the liquid slops over, or it otherwise exhausts one's time and temper To obviate these annoyances would mean to enhance the utility and availability of the method by electrolysis, and I therefore present this preliminary report of the results which I have secured by the use of the Edison electric light circuit and the McIntosh current controller

The Edison current is characterized by the conditions best adapted to electrolysis, that is moderately high tension or voltage, the volt being the unit of electro motor force, and comparatively low current strength or amperage The Chicago Edison current has an E M F of 110 volts, or about double that of a battery of 50 Daniells cells, one Daniells cell being selected as the standard, having an E M F of 1 volt The amperage depends on the amount of resistance in the circuit and it is so reduced by the resistance of lamps, controller, and human tissues as to be measured in milliampères or thousandths of an ampere The current strength necessary for electrolysis of nasal spurs is from 15 to 25 milliampères, measured with the resistance of the spur in the circuit, and to supply this current from fifteen to twenty-five cells of a galvanic battery would ordinarily be used with a corresponding E M F of from 12 to 20 volts or more It is evident, therefore, that the Edison circuit, while correct in kind, is far too intense in degree and must be reduced

Mr Neiswanger, electrician to the McIntosh Battery & Optical Company, on request, has furnished the following description of the current-controller which I have used

> ' The controller works on the 'shunt' principle The machine circuit consists of a succession of coils, nineteen in all, joined in series and having a united resistance of 209 ohms The patient may be placed in a shunt to one or more coils The coils vary in size, but are so proportioned as to modify the voltage in tenths and hundredths The sliding contacts are arranged in two rows The one on the left is connected with the larger coils, and consequently each coil in this row divides the E M F in the machine circuit by ten The one on the right is connected with the other row of contacts, and each coil divides the E M F by one hundred The two rows may be used singly or together "

The accompanying diagram illustrates the essential parts of the instrument

To elucidate the controller is so constructed that if placed in direct connection with the 110 volt circuit, and the left-hand or decimal slide be advanced to 1, enough coil resistance is removed to secure a current intensity of 1 of 110 volts, equal to 11 volts In like manner, if advanced to 2, 2 of 110 volts is secured, equal to 22 volts If, now, the right-hand or centesimal slide be advanced to any given contact, say 4, there will be added 04 of 110 volts, or 4 volts, equal now to 26 volts

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[1] Revue Mensuelle d'otologie et de Laryngologie cited by Garel (Loc cit)

Annals des Maladies de L oreille du Larynx etc Tome xv 1889 pp 638

[3] Verhandlungen des x Internationalen Medicinischen Congresses Band iv

[4] Du Traitement par Electrolyse des Deviations etc., Paris 1892.

The Journal of Laryngology Rhinology and Otology May, 1894

[6] Medical Record Aug 5 1893

The JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION Nov 10 1894

But the decimal division of an initial 110 volt circuit is still too painful on advancing the contacts, so I have resorted to the expedient of placing a 16 candle electric lamp in the circuit ("in series") the resistance of which reduces the original E M F, aside from the action of the controller, to an initial current of 55 volts, or sometimes of placing two lamps in series in the circuit which reduces the initial current to 27 volts

The result is that, with one lamp in the circuit, on advancing the decimal slide of the controller to 1, enough coil resistance is removed to secure a current of 1 of 55 volts, or advancing to 2, 2 of 55 volts, equal to 11 volts And on advancing the centesimal slide, there will be added at each successive coil contact 01, 02, 03 or 04 of the initial 55 volts, or if stopping at 4, equal to 2 volts, which added to the 11 volts of the decimal slide, makes in all 13 volts This is the arrangement of the mechanism with which I have treated most of my cases

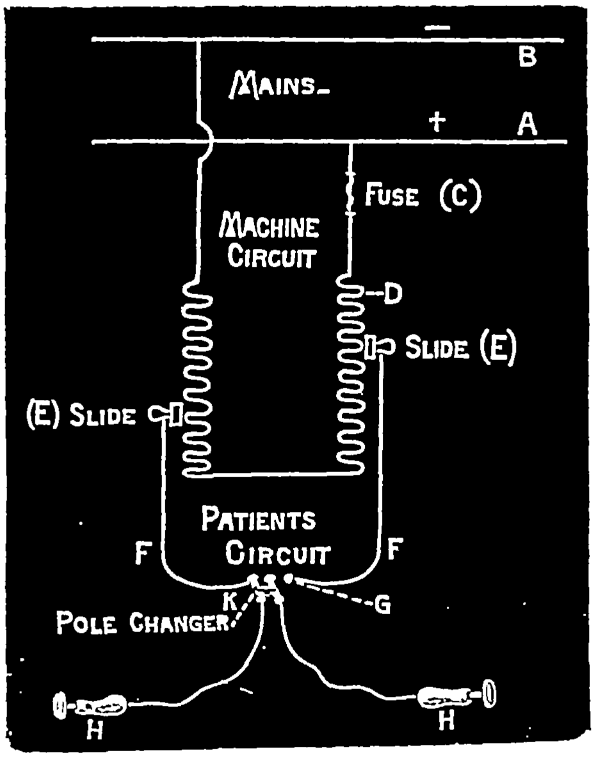

Fig 1

In one case herewith reported, I placed two 16 candle lamps, in series, in the circuit, which reduced the initial electro motor force with which the controller had to start, to 27 volts, and with the advance of the decimal slide to 1, 2 and 3, each point represented 1 of 27 volts, and each successive contact of the centesimal slide an addition of 01 of 27 volts In this manner a finer subdivision of the voltage is made and, possibly, less shock occasioned as the contact is moved from coil to coil

The lamp must be placed "in series" and not "in multiple," Figs 2 and 3 The degree of reduction in the E M F, when thus placed, was accurately determined by means of a volt meter

The controller has been constructed and has been thoroughly tested with a view to absolute safety A fusible wire that burns out when the current exceeds 500 m a is placed in the machine circuit, the supports for this fuse being two inches apart, it is impossible for the largest commercial currents to "arc" across, or jump from post to post In addition, connected with the Edison circuit to which I attach the controller are two fusible plugs, one in the house and one on the street, which serve to protect the Edison mechanism against the results of accidental connection, when grounded, of their own and other more highly charged wires, e g, arc lighting and trolley wires Moreover, the one or two 110 volt lamps which are placed in the circuit to reduce the initial voltage would serve as additional safety appliances against the largest commercial currents, for they would be burned out, and being arranged in series, the circuit would then be interrupted Any or all of these, it would seem, would prevent anything like a fatal charge ever accidentally reaching the patient, but the main reliance against what might prove a painful shock is placed on the controller fuse itself, which I am assured is of delicate and accurate construction. Mr Neiswanger, of the McIntosh Battery & Optical Co, states that he made the following tests before an assembly of physicians and electricians at Rochester

1 One thousand seven hundred volt alternating current, three fuses preceded the controller, of which the first two burned out on making the contact

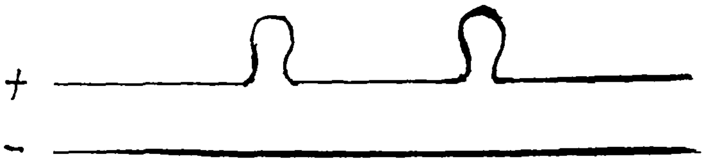

Fig 2—Lamps "in series"

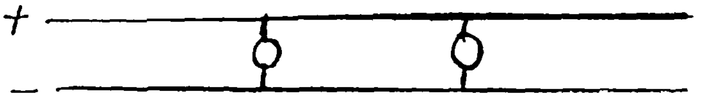

Fig 3—Lamps "in multiple"

2 One thousand seven hundred volt current, one fuse preceded the controller, both it and the controller fuse burned out

3 One thousand seven hundred volt current connected directly with the controller, both sponge electrodes held in one hand, fuse burned out instantly without communicating any charge to the experimenter

The character and arrangement of the needles still presents a fruitful field for the labors of those especially possessed of mechanical abilities Two methods are in vogue, the monopolar and the bipolar, although the latter is now preferred by Moure and his followers By the monopolar method, a single needle attached to one pole, preferably the positive according to Moure, and the negative according to Garel, is inserted into the spur, while a large plate electrode of chamois, constituting the negative pole, is held on some indifferent portion of the body, as between the shoulder blades or on the upper arm

By the bipolar method, two needles, one representing the positive and the other the negative pole, are both inserted into the spur, so that the current passes only from one needle to the other within the tissue to be destroyed, although the spur for a short space on all sides of the immediate area of insertion will be affected by the electrolytic action The needles which I have used in the cases herewith reported are made of irido platinum and are soldered to light parallel copper bars, fashioned like a galvano cautery electrode, for insertion into a cautery handle I have not, however, used a handle, but fastened the instrument directly to the conducting cords for the sake of lightness and easier adjustment The needle tips are 8 m m in length, 2 m m apart, and are quite thin They are in fact rather delicate and too short for the larger spurs, so I have had constructed a heavier and longer pair made of irido-platinum, mounted in a similar manner and attached straight, to a delicate handle These needles are nearly as stiff and hard as steel and have almost, perhaps not quite, an equal penetrating power They are about 20 m m in length (Fig 4)

The needles, instead of being permanently fixed parallel with each other, might be attached to separate holders and then introduced, each at any desired point in the spur, but this arrangement is awkward At times it might be desirable to have one or both needles slightly curved, in order to more closely follow the contour of a curved excrescence If parallel needles are used, they may be inserted either perpendicularly or horizontally, or at any angle between these positions, whichever conforms best to the shape of the spur

Moure employs ordinary sewing or sailmaker's needles of steel, regarding the oxidation of the positive needle, when of steel, as immaterial if a new one be used at each treatment Not being able to secure a satisfactory adjustable needle holder which would carry two points, I have used needles of platinum, hardened by admixture with iridium, which not being oxidizable, can be permanently soldered to a delicate holder and are then always ready for immediate use

It is the consensus of opinion that the bipolar method is equally efficient and less painful and troublesome than the monopolar, and also that with the bipolar method not more than two needle tips, one representing each pole, should be used

Case 1—Mr W M , medical student, is under treatment for hypertrophic rhinitis, and has also an excrescence from the base of the cartilaginous part of the septum, not of large size but which materially diminishes the lumen of the nostril

Feb 22, 1895, electrolysis by means of the Edison current and McIntosh current controller, one 16 candle lamp in the circuit Bipolar method with irido-platinum needles 8 mm (⅓ in) in length, attached in a single holder 2 mm apart The decimal slide of the current controller was pushed to 1, and the needles were then inserted into the anterior segment of the spur The slide was then advanced to 2, which equals a current of 11 volts, the milliampère meter registering 15 milliampères , ebullition of gas , crackling sounds , not painful The current was then increased by pushing the centesimal slide gradually to 4=18 volts registering 17 milliampères Now painful but tolerable Continued seven minutes The needles were then withdrawn and re-inserted one half inch farther back in the posterior segment of the spur and the process exactly repeated for seven minutes One drop of blood only on withdrawing the needles the first time

March 1 He reported having suffered no discomfort from the treatment

March 14 The slough has not yet separated

March 26 Result very satisfactory, the spur having disappeared, all except an insignificant remnant close to the nasal floor

Remarks—This was an experimental case The excrescence was of small dimensions and chiefly cartilaginous I might not have deemed it necessary to interfere with it by the surgical method, yet the patient is much improved by its reduction The slough did not separate, as a whole, but seemed to liquefy, and be in part discharged and in part absorbed without complete destruction of the mucous membrane, which has therefore been reproduced in the process of cicatrization more perfectly than is usual after the cutting operation This is an advantage as the tendency to incrustation, so frequently observed after the surgical method, due to the poor quality of reproduced mucosa will be avoided It is an advantage, however, which does not invariably follow electrolysis, since if the slough produced be large it will separate as a whole, with corresponding complete destruction of the surface mucosa

Case 2—Mr A G M , has been under treatment for hypertrophic rhinitis and adenoid vegetations which are now remedied He still complains of inability to breathe through the right side of his nose which disturbs his sleep The cartilaginous septum is deflected to the right and, in addition, situated toward the base of the convexity is an excrescence which projects sufficiently forward to approach the partially collapsed ala and so close the nostril By the removal of the excrescence without interference with the deflection, enough space could be gained for comfortable respiration The patient is of a nervous disposition and slight operative measures cause him involuntarily to flinch so badly that the surgical method might involve unusual difficulties

February 23 Electrolysis by means of the Edison current and McIntosh current controller, one 16-candle lamp in the circuit The same needles were used as in Case 1, being inserted 8 mm into the anterior segment of the spur for eight minutes, then withdrawn and re-inserted the same distance behind, into the next adjoining segment of the spur for six minutes With each insertion the decimal slide was advanced to 2, and the centesimal slide to 8, which equals about 18 volts, the milliampère meter registering at different moments from 15 to 25 milliampères Pain was felt only on making the contacts, chiefly on increasing the decimal slide from 1 to 2 A whitish discoloration, shading off to blue, was observed around the needles, and thus guided, an inspection of the opposite side was maintained in order to guard against ultimate perforation

March 11 The slough from the previous treatment has separated leaving a large concavity with projecting edges back and front of it which must be removed Electrolysis to the anterior edge, care being taken not to perforate because the needles, superficially inserted, are nearly opposite the point of greatest concavity Therefore a current of much less intensity, E M F , 7.5 volts, 7 milliampères was applied for seven minutes Result satisfactory

March 29 Electrolysis to the posterior edge or segment, the same quantity of electricity as at the first sitting being used

April 9 Final result entirely satisfactory, the excrescence having been removed quite as perfectly as if it had been done by the surgical method.

Remarks—The treatment was unusually tedious in this case, three sittings being required because unusual care was necessary not to produce a perforation by too extensive an effect at any one time It has been asserted as a disadvantage, that perforation is especially liable to result from electrolysis This case satisfied me that it could be avoided by proper care in any case in which it would be avoidable by the surgical method

Case 3 for the sake of brevity will not be recorded in detail Mr M J H , age 25 suffered from pulmonary tuberculosis in a state of arrest, but he complained at this time of nasal obstruction due to an excrescence of the kind which begins anteriorly and runs upward and backward, following the sutural line of the vomer and cartilaginous plate of the sep-

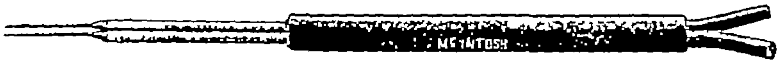

Fig 4 —Author's Needles

tum and terminating opposite the middle turbinal Both cartilage and bone entered into its composition and the result of electrolytic treatment was fairly satisfactory, the spur being very much reduced in prominence but not wholly removed The reduction in volume of the spur was probably commensurate with the proportion of cartilage contained in it

Case 4 was less successful Mr E R, aged about 19 years, has been under treatment for hypertrophic rhinitis, adenoid vegetations and hypertrophy of the tonsils, which are now remedied He has also a septal spur of the kind which begins anteriorly and runs upward and backward, terminating opposite, and projecting into, the middle meatus of the right side Likewise a smaller chiefly cartilaginous excrescence on the left side, anteriorly at the base of the septum

March 20 Electrolysis to the spur of the right side, 11 volts, 20 milliampères for four minutes, when the patient so nearly fainted that it was necessary to discontinue the treatment The needles would not penetrate thoroughly into the spur, the bone seemingly being of ivory hardness

March 22 Electrolysis to the smaller cartilaginous excrescence on the left side, 11 volts, 12 milliampères for five minutes, the patient again complaining of faintness and pain the treatment was abbreviated

April 22 The larger spur is practically unchanged, the smaller cartilaginous one has disappeared but the space has not yet entirely healed

April 27 Electrolysis again attempted on the larger spur, the heavier needles for greater penetrating power, and the method with two lamps in the circuit for the more gradual application of the current being selected This treatment was also a failure for the needles could not be made to penetrate adequately, and beside the patient nearly fainted after three minutes of a current of only 8 volts and 10 milliampères

Remarks —This case demonstrates that the electrolytic method has its limitations As one would expect, difficulty will be encountered in inserting the needles into those spurs and ledges which are composed largely of bone of ivory-like hardness, which would seem to limit the method in its greatest degree of usefulness to excrescences which are composed mainly of cartilage, or to those of bone in which it will suffice to remove the cartilaginous surface, together with whatever of adjoining bone can be influenced without inserting the needles directly through hard bone itself However, the cases of spur from the nasal septum for which the electrolytic method of reduction *is* applicable are very many and with the efficiency, convenience and compactness of the McIntosh current controller which adapts the Edison electric circuit to its use, I consider it a valuable addition to our resources Still other cases are under treatment, the result of which additional experience will be communicated at an early date in another paper

Venetian Building

TREATMENT OF PELVIC PUS CASES BY ABDOMINAL SECTION—REPORT OF SIXTY-SIX CASES, WITH REMARKS

BY J WESLEY BOVÉE, M D

WASHINGTON D C

In this resumé of my work in abdominal section for the relief of various suppurating diseases in the female pelvis, whatever I may offer as deductions is given for what it is worth Previous to 1891 this class of surgery was little known in this city and, I might almost say, not at all practiced So that four years practically covers the amount of time over which ranges the experience of Washington abdominal surgeons in celiotomy in cases of pelvic pus

A large majority of the series have been operated upon in the presence of quite a large number of medical students and physicians, and have been in the free wards of Columbia and Providence Hospitals From the nature of the environments of such patients, their general condition is usually very bad Add to this, the effects of such devitalizing pathologic conditions, as are noted in another part of this report, and you will easily understand how feeble is the framework upon which we hope to effect a regeneration I am very certain that a number of patients who were saved by operation, would have soon died had nonsurgical treatment alone been employed I am more positive of this, because of certain other cases that were admitted to the hospitals and died before operation In this belief I know that I am antagonizing the statement of the lamented Goodell, "that very rarely will these pus cases die if not operated upon" During my service at Columbia Hospital for Women, have been admitted cases I have considered too weak for operation the day of admission, I have directed the resident physician to prepare them next day for operation, provided they were living, and they have died in the meantime Other cases have refused to submit to operation and have died within a short time outside

These cases have led me to appreciate how near the life margin were a number of those in this report before operation You will, therefore, readily understand that a series of such cases does not indicate a series of selected cases operated upon for a fine record rather than saving of endangered lives Had I been jealous of my record, I could easily have declined operation in some cases that died afterward In fact, seven of my mortality list were cases that were considered far more liable to die than to recover

My first case of this kind was done March 17, 1891 It was a puerperal case, delivered in Columbia Hospital Puerperal septicemia followed and a large abscess in the abdomen was detected High fever and a rapid feeble pulse with other dangerous symptoms being present, abdominal section was done the forty-second day after labor By the hospital people it was thought she would die with or without an operation, and I afterward learned the hospital superintendent engaged a special nurse for two days, expecting the patient to live no longer than that The uterine wall had been bored through on the left side just above the ovarian ligament, the cavity of the Fallopian tube had become a part of the abscess cavity, which extended nearly to the spleen and was separated from the intestines by a great mass of exudate The abscess sac was removed and the uterine wound cleaned and sutured She made an excellent recovery and is now robust and well This was, I believe, the first case of the kind successfully operated on in this city Twice since, have I operated (Cases 3 and 29) in cases of puerperal septicemia in which putrid infection was present, both patients dying I believe this variety of cases is the worst the abdominal surgeon has to deal with As it is considered a fatal condition, the saving of even a small percentage of cases of puerperal putrid infection by celiotomy should be considered quite successful When you open a women's abdomen and find the broad ligament, lymphatics, intestines and other adjacent structures saturated with pus, as was one of my cases, you can not but realize how little we can do to prevent a fatal termination But we must hope to find most puerperal septic cases in a more favorable condition In the very bad cases I am not sure that abdominal surgery is advisable I am convinced cases like No 3 should not be subjected to operation In this *case, the ovaries were large free* pus sacs, the Fallopian tubes apparently normal, and the lymphatics between the ovaries and uterus, great pus channels The autopsy revealed the uterus,kidneys and intestines riddled with pus Case 29 lived two weeks and died twenty-four hours after a hurried second operation which revealed the posterior wall of the uterus entirely sloughed away and the intestinal wall reservoirs of pus This pus is highly infectious and the patient rapidly succumbs to the poison

I have done no simple exploratory operation in pus cases and have never abandoned a case As a result, the number of deaths from operation is greater than it otherwise would be The question of leaving an appendage in suitable cases has been presented to me in a practical manner but a few times, double disease being present in nearly every case I have when possible, left an ovary, or a portion of one, that the menopause might not be brought upon the patient suddenly while she is recuperating from the depression of vitality due to disease and suppuration The patient does not feel unsexed if menstruation continues

The right appendage, has in a large majority of my cases, been the most severely diseased, and very often I found the vermiform appendage so intimately adhered to a right suppurating mass as to require its removal In a few cases it was slightly adhered to the uterus or Fallopian tube and not removed

Pyosalpinx on both sides occurred in thirty cases, and on one side only, in seventeen cases, making forty-seven cases, or 71 per cent of the series in which pyosalpinx, technically speaking, was present Pus was present in the tube, however, in sixty-five cases Double tubo-ovarian abscess was found nine times and in twelve cases this condition was on one side only—much more frequently than I had supposed it is found

Ovarian abscess was found in fifteen cases, being double four times

Deaths —The mortality rate of all cases was 16 per cent Case 2 was a very bad one and would, perhaps, have died had the most skilled abdominal surgeon done the operation Owing to lack of experience my conception of the pelvic conditions may have been exaggerated and possibly I would now successfully operate in similar condition She survived the operation but five hours, dying from shock

Cases 3 and 29 have been previously mentioned as suffering from putrid infection Case 10, tubo ovarian abscess and broad ligament cyst of the opposite side has already been referred to She took ether badly, the pulse was 150 as the operation was about to begin It was considered a temporary effect of ether and the operation proceeded Strychnia and brandy were generously given hypodermically during the fifty minutes the operation consumed The cyst was principally on the right side, though it had lifted up the peritoneal coat of the uterus entirely and dipped down into the left broad ligament and Douglas pouch It contained three quarts of clear fluid and was not entirely removed A left tubo-ovarian abscess, badly adhered, was removed Her pulse was 180 at the finish and the patient continued in shock until her death, thirty-three hours later

Case 12, hydrosalpinx and pyosalpinx The adhesions in this case were such as are seldom found When anesthetized the appearance of the abdomen reminded one of a uterine fibroid reaching nearly *to the umbilicus This proved to be a hydrosalpinx,* formidably adhered and very large Its enucleation was an exceedingly difficult task and led to severe bowel tears A Fallopian tube containing six ounces of pus was removed from the opposite side I erred in stopping to suture the intestinal wounds, as the operation was thus prolonged to ninety minutes and the patient did not react from the shock before her death seventeen hours later

Number 14, had had a criminal abortion performed and the removal of double tubo-ovarian abscess was followed by panic The patient clamored to go home and declared she would die if kept in the hospital Despite these features of the case I expected her to recover She suddenly expired, however, on the third day after an effort to get out of bed She probably died from embolism

Case 21 was one of double pyosalpinx and a right ovarian abscess containing four ounces of foul-smelling pus, a bad case with general adhesions The operation required thirty minutes and a drainage tube was used three days Until the ninth day she progressed as favorably as any patient could be expected During that day she had a severe pain in the region from which the ovarian abscess was removed Suspecting bowel adhesions to be the cause, salines and other remedies were administered, but the bowels did not respond satisfactorily, the abdomen was meteoric, the intensity of the pain continually increased and her expression was anxious On the fifteenth day vomiting, not stercoraceous, set in and that afternoon I reopened the abdomen and found three loops of small intestines fastened by general adhesions into the right half of the pelvic cavity The amount of adhesions that had formed in fifteen days in spite of salines and other drainage was remarkable The intestines were liberated and punctured to allow escape of gases She was flushed out with normal salt solution and a hot rectal enema of salt Epson salt and whisky administered She lived about thirty minutes When vomiting began, I realized I had postponed the second operation too long, but tried to make amends by operating even at that late stage

Case 35 was an emergency case, a prostitute and opium habitué, suffering with intestinal obstruction, almost constant stercoraceous vomiting and an abdomen filled with pus The next morning after entering Providence Hospital I saw her and urged abdominal section which she absolutely refused She decided to go to Baltimore next day, a trip I knew she could not possibly take, and she was given morphia in large doses That night a telephone message from the hospital announced her desire for operation The following morning her condition was such that an operation seemed cruel Nevertheless I opened the abdomen under ether As soon as the peritoneum was incised about six ounces of pus escaped The intestines and omentum were separated from the inferior surface of an ovarian abscess extending nearly to the liver From the character of adhesions, I suspected a dermoid cyst It was aspirated, but as this process seemed too slow, a Tait's trocar was used to empty it of about three quarts of horribly offensive pus A ruptured pyosalpinx was found and removed and another containing four ounces of pus was removed from the other side Nearly a gallon of pus was removed from this patient The operation was hurried, but the patient died a few minutes after its completion During the operation she seemed likely to die at any minute and I did not expect her to be taken from the table alive I have since learned she had had an abortion about four weeks before the operation

Causes—I do not think that social condition and age have much bearing upon the etiology of these conditions, except that puberty and the menopause usually limit the time Then, too, so long as otherwise respectable women resort to criminal abortion to rid themselves of prospective trouble incident to child-bearing and child-caring, they, as well as the various species of prostitutes, will be liable to pelvic suppurative inflammations The relative number of cases due to gonorrhea is thus far speculative A diagnosis by staining or cultures can hardly be expected in gonorrheal pyosalpinx or ovarian abscess of long standing

Abortion is a frequent cause, as are various kinds of debauchery In fact, I believe many cases might be traced to these, could a correct history be procured I believe, however, that many cases of suppurative inflammation of women's tubes and ovaries are not due to sexual contact in any way, but rather to injuries from accidents, "taking cold" during a menstrual epoch or unusual hard work and exposure Add to these a debilitated condition and we have the true causes of many cases While gonorrhea lurks, for long periods of time, in the uterine mucosa, we often have endometritis in the virgin and it may easily extend to the Fallopian tubes, causing under favoring circumstances a purulent inflammation

Anesthetics—To produce anesthesia, ether alone was used in fifty-two cases, chloroform alone in two, and chloroform followed by ether, or *vice versa* twelve times Where no contra-indications to either anesthetic exist, I prefer to begin with chloroform and if operation extends beyond thirty minutes, to substitute ether at the expiration of that time For prolonged anesthesia I prefer ether I am led to believe that the danger of producing renal hyperemia by anesthetics extends to the employment of chloroform Case 64 was one in point

Rupture of pus sacs during removal is a dangerous complication of celiotomy and should be studiously avoided In weak patients the fight against disease germs by the peritoneum will be made easier for our patients, by preventing the leakage among the pelvic and abdominal viscera, that often follows such ruptures We should be constantly on our guard to do so Unfortunately we can not often prevent such rupture from taking place We can, however, usually wall these pus collections off from the surrounding structures by gauze plaques, thus preventing contamination Of course, there are many cases of sterile pus, but how are we to be sure of such conditions previous to the attempt at removal In thirty-four of my cases, rupture occurred

Adhesions were present in sixty-four cases and were very bad in forty-nine Great care is necessary in dealing with them The posture of Trendelenburg is undoubtedly of great assistance in separating bowel adhesions, as well as in checking hemorrhage from vessels of considerable size In employing this auxiliary we should bear in mind that the abdominal viscera is placed nearly under the diseased pelvic structures, and leakage of pus among the intestines is thus facilitated Nor should we lose sight of the fact that quite large vessels may be left open during enucleation in this position, only slight bleeding occurring, and when the horizontal position is resumed severe hemorrhage follows It is probably best not to use this position beyond fifteen minutes Great care is necessary to prevent injuries to the bowels in separating them from the masses to be removed This occurred in nineteen of my cases, in five of which the bowel wall was torn completely through, the wounds stitched and complete recovery followed. Many times the recovery of the patient is greatly imperiled by the delay incident to suturing a number of small tears in the outer coats of the bowels and in such cases it is often best not to prolong the operation to cover these surfaces

Hemorrhage from various causes often occurs during these operations In a few of my cases it was due to the slipping off of ligatures from large or too short pedicles In such cases it has been my practice to pick up the stumps of the ovarian and uterine arteries with artery forceps, whip stitch the cut surfaces of broad ligaments between them and then to ligate these vessels separately and stitch them together In patients of low vitality the loss of even a small amount of blood may endanger their lives In such cases the hypodermic injection of normal salt solution has been resorted to with great satisfaction In Case 33, severe hemorrhage occurred in a vein low in the broad ligament One pint of this solution was thrown into the bowel and the abdomen flushed with it During the following twenty-four hours she received, under the skin, a total amount of sixty-two ounces and made a good recovery Case 57 was given six and one-half pints We should avoid using too much at one time and placing too much in one place I have had small sloughs form from these causes When practicable, it should be injected into some medium-sized vein

The use of sterilized hot water or salt solution in flushing out the pelvic cavity was followed in sixty cases This is almost indispensable where pus has escaped during the operation or there is considerable oozing from adhesion wounds The stimulating effect of flushing was not found so valuable as had been supposed

Drainage—I am very partial to the use of the glass drainage tube It was employed in forty-one cases on an average of two days I believe the time-honored maxim "When in doubt, drain," is a safe one to follow, notwithstanding many abdominal surgeons consider its use as evidence of slovenly surgery Unless the nurse be well trained, however, the danger accompanying its use counterbalances its advantages. I did not use vaginal drainage in any case, as I consider it inferior to abdominal It is almost impossible to keep the vagina sterile We are only to remember the odor and discharge that comes from the wound in the top of the vagina a few days after vaginal hysterectomy, to appreciate the liability to infect the pelvic and abdominal cavities if an opening from the vagina into the peritoneal cavity be left for drainage The newly made track through the abdominal wall, it seems to me, should be much better

High temperature previous to operations was common In some cases it was high at the time of the operation In four cases that recovered, the temperature ranged from 103 to 106 degrees for several days previous to operation, and in three that died, it ranged equally as high

In such cases it was noticed that after the operation the temperature usually dropped rapidly the first day and, later, gradually to normal or thereabout A transient, slight rise often occurs after operation, even in cases that have been normal in that respect It is usually unimportant, being due to cathartics, stitch-hole abscesses or nervous irritation There must be something more than moderate fever to indicate danger

Additional Operations and Complications —In eight cases, endometritis was such a marked complication that curettement and packing of the uterus was done just before the abdomen was opened In Cases 21 and 29, both fatal, a second celiotomy was done

Intestinal obstruction was present in Case 21 after the first operation and in Case 35, making a primary operation imperative Abdominal fistulæ followed in three cases for various periods I may perhaps attribute to Dame Fortune the fact that, so far as I know, I have had in these sixty-six cases no pelvic hematocele or mass of exudate (other than three abdominal fistulæ cases), no fecal fistulæ, no ureteral injuries and no tear completely through the bladder wall Two cases of peritonitis occurred, Nos 21 (incident to intestinal obstruction) and 53

After Treatment —The patients are usually kept in bed twenty-one days and if any complications be present at the expiration of that time, their getting up is postponed Often if the patient is restless the first night after operation, one-twentieth to one-tenth of a grain of morphia is administered hypodermically, which relieves sufficiently pain and relaxes nerve tension to produce a night's sleep with the result of having a refreshed patient next morning This is a great gain in desperate cases where we look to the first two days' history as an indication of the ultimate result It is not sufficient to cause bowel paralysis The second day an attempt is made to move the bowels by salines and purgative enemata When this has been effected once or twice and the patient is little disturbed, our prognosis should be favorable, The use of strychnia both before and after operation, by the mouth and hypodermically, is of great value It is the best heart tonic and hypodermically is an excellent stimulant

The examination of urine is of the utmost importance before any severe surgical operation can be performed We can not be too particular about its condition It is not sufficient to have the specific gravity, reaction, and absence or presence of albumin in a given specimen We should know the amount voided in a full day, and in addition, too, the amount of urea and urates, also whether epithelium from kidneys or ureters is present We must ascertain whether the kidneys are acting well as eliminators, whether the *débris* of tissue waste is being carried off We must not be misled by a trace of albumin as the only pathologic ingredient, for it often comes from the vagina instead of the bladder Catheterized specimens are most reliable for examination A trace of albumin often occurs when large collections of pus are present

SIXTY SIX CASES IN WHICH CELIOTOMY WAS DONE FOR PELVIC PUS-FORMING DISEASES

Case 1 I M age 22 single puerperal septicemia tubo-utero abdominal abscess removal of left appendage and cornu of uterus March 17 1891 glass drainage three days recovered operation forty two days *after* delivery

Case 2 L F age 30, single putrid infection multiple abscesses removal of both appendages Feb 15, 1892 glass drainage died in sixty three hours

Case 3 Mrs —, age 30, married double pyosalpinx and double ovarian abscesses, removal of both appendages in pieces April 26, 1892, glass drainage died in five hours

Case 4, Mrs N age 30 married double pyosalpinx, removal of both appendages June 2 1892 no drainage recovered

Case 5 Mrs M, age 40 married double tubo-ovarian abscesses removal of both appendages Sept 14, 1892 glass drainage two days recovered

Case 6 I W age 23 married double tubo ovarian abscesses removal of both appendages April 22 1893, glass drainage two days recovered

Case 7, M W age 27 widow double tubo ovarian abscesses removal of both appendages May 18 1893, glass drainage three days recovered

Case 8, L D age 27, married double pyosalpinx and large pelvic hematocele, removal of both appendages and hematocele June 12 1893, glass drainage two days recovered

Case 9 S C age 34, single double pyosalpinx removal of both appendages June 10, 1893, no drainage recovered

Case 10, A R, age 42, married right broad ligament cyst and left tubo-ovarian abscess removal of both appendages and nearly all of cyst June 22 1893 glass drainage one day died in thirty three hours of shock

Case 11 Mrs M, age 32 married double tubo-ovarian abscess, removal of both appendages July 8 1893, glass drainage two days recovered

Case 12 A G age 22 single hydrosalpinx and pyosalpinx, removal o both appendages July 13 1893 glass drainage died of shock in seventeen hours a very bad case

Case 13 J L age 31 widow left tubo ovarian abscess and right pyosalpinx removal of diseased parts July 27 1893, glass drainage one day recovered

Case 14 A C age 25 married double tubo ovarian abscess, removal of both appendages August 29, 1893, glass drainage two days was panic *stricken* and died suddenly on third day

Case 15 Mrs M age 28 married double pyosalpinx removal of both appendages August 30 1893, no drainage recovered

Case 16 I D age 18 married left suppurating dermoid cyst of ovary and right tubo ovarian abscess removal of both appendages Sept 7 *1893* no drainage recovered

Case 17, M M age 26 widow left tubo ovarian abscess and right ovarian abscesses and pyosalpinx, removal of both appendages Sept 14 1893 gauze drainage a few days recovered

Case 18 S H age 23, married pyosalpinx and ovarian abscess, removal of both appendages Sept 25, 1893 no drainage recovered

Case 19 M W age 18 married double tubo ovarian abscess removal of both appendages Nov 9 1893 glass drainage one day gauze two days recovered

Case 20 K W age 27 married ovarian cyst and pyosalpinx removal of both appendages Nov 13 1893 no drainage recovered

Case 21 L G age 23 single ovarian abscess and double pyosalpinx removal of both appendages Nov 16 1893, glass drainage one day, gauze two days died on fifteenth day after second operation

Case 22 L J age 27, married left pyosalpinx and right utero tubo ovarian abscess, removal of both appendages Nov 20, 1893, glass drainage two days and gauze recovered

Case 23 C J age 30 married ovarian abscess and double pyosalpinx removal of both appendages Nov 23 1893 glass drainage two days recovered

Case 24 L B age 21, widow double tubo ovarian abscess removal of both appendages Dec 11, 1893 glass drainage one day recovered

Case 25, S S age 22 single double pyosalpinx removal of both appendages Dec 28 1893, no drainage recovered

Case 26, E S age 18 married double pyosalpinx, removal of both appendages Jan 8, 1894 no drainage recovered

Case 27 N S age 24 married double pyosalpinx removal of both appendages Jan 8, 1894, glass drainage one day, gauze two days recovered

Case 28, C A age 30 married pyosalpinx and tubo-ovarian abscess removal of both appendages Jan 18, 1894, glass drainage one day gauze two days recovered

Case 29 Mrs G age 35, married putrid infection removal of both appendages Jan 28 1894, glass drainage two days died in fourteen days after second operation

Case 30 Mrs H age 25 widow double tubo-ovarian abscess, removal of both appendages, Jan 29 1894 no drainage recovered

Case 31 L L, age 22 married double pyosalpinx and left ovarian abscess, removal of both appendages Feb 5 1894, no drainage recovered

Case 32 Miss K, age 26 single ovarian abscess and double pyosalpinx removal of both appendages Feb 5, 1894 no drainage recovered

Case 33 L A age 22 single large ovarian hematoma and double pyosalpinx removal of both appendages March 8 1894 no drainage recovered

Case 34 Miss M age 19, single double pyosalpinx removal of both appendages March 20 1894 no drainage, recovered

Case 35 Mrs S, age 32 married double pyosalpinx and ovarian abscess and intestinal obstruction removal of both appendages April 2 1894 glass drainage died in a few minutes nearly one gallon of pus removed

Case 36 Mrs G age 30, married multilocular ovarian cyst and double pyosalpinx removal of both appendages April 10 1894 glass drainage two days recovered

Case 37 Mrs D, age 38 married dermoid ovarian cyst ovarian cyst and double pyosalpinx removal of both appendages April 26 1894 no drainage recovered.

Case 38 Mrs M age 30 married ovarian cyst and pyosalpinx (pregnant) removal of both appendages May 17 1894 no drainage recovered delivered Dec 21 1894

Case 39 H D., age 25 widow double pyosalpinx removal of both appendages May 21, 1894 glass drainage one day recovered

Case 40 Mrs J age 23 single double pyosalpinx removal of both appendages May 28 1894 no drainage recovered.

Case 41 Miss M age 22 single ovarian abscess and double pyosalpinx removal of both appendages May 31 1894 no drainage recovered

Case 42 Julia B age 40 widow right ovarian cyst and left pyosalpinx removal of both appendages Aug 27 1894 no drainage recovered

Case 43 A H age 19 married double pyosalpinx removal of both appendages Sept 1 1894 no drainage recovered

Case 44 R. P age 31 married double pyosalpinx removal of both appendages Oct 17 1894, no drainage recovered

Case 45 H J age 20 single tubo ovarian abscess and ovarian cyst removal of both appendages Oct 25 1894 glass drainage two days recovered

Case 46 P age 32 widow omental dermoid cyst double ovarian abscess and right pyosalpinx removal of both appendages and dermoid Nov 5 1894 glass drainage two days recovered

Case 47, Mrs C, age 20 widow pyosalpinx and tubo ovarian abscess removal of both appendages Nov 28, 1894, glass drainage two days, recovered

Case 48, V T, age 30, single right pyosalpinx, removal of diseased part Dec 20, 1894, glass drainage two days, recovered

Case 49, L F, age 19 single, ovarian abscess and double pyosalpinx, removal of both appendages Jan 14, 1895, glass drainage two days, recovered

Case 50, M F, age 22, single left parovarian cyst and right pyosalpinx, removal of both appendages Jan 20, 1895, no drainage recovered

Case 51, Mrs D, age 21, married ovarian abscess and double pyo salpinx, Jan 28, 1895, glass drainage two days, recovered, curetted May 20, 1895

Case 52, Mrs W, age 27, married tubo ovarian abscess and salpingitis, removal of both appendages Jan 31, 1895, glass drainage three days, recovered

Case 53, H, age 19 widow double pyosalpinx, left ovarian abscess and endometritis, removal of both appendages and endometrium March 10 1895, glass drainage died acute septic peritonitis

Case 54 M G, age 25, single, double pyosalpinx and double ovarian abscess, removal of both appendages March 10, 1895, no drainage, recovered

Case 55, A P, age 35, single double pyosalpinx and double ovarian cysts and uterine fibroids, removal of both appendages March 14, 1895, no drainage, recovered

Case 56, M S age 33 married double tubo ovarian abscess, removal of both appendages March 21 1895, glass drainage thirty two hours, recovered left abscess contained twenty ounces of pus

Case 57, H, age 25 married, pyosalpinx, ruptured tubal pregnancy and endometritis, removal of both appendages and endometrium March 23, 1895, glass drainage thirty six hours, recovered, septic infection due to attempted criminal abortion

Case 58 J B, age 27, single, pyosalpinx and tubo ovarian abscess, removal of both appendages April 7, 1895 glass drainage recovered

Case 59, J W, age 38, married pyosalpinx and pelvic abscess, removal of both appendages April 15, 1895, glass drainage, died of shock, nineteen hours later mitral regurgitation

Case 60, Mrs S age 23, married, double pyosalpinx, ovarian abscess, ovarian cyst and endometritis, removal of both appendages and endo metrium May 1, 1895, glass drainage two days, recovered

Case 61, I S, age 23 single pyosalpinx and tubo ovarian abscess, removal of both appendages May 4, 1895, glass drainage thirty six hours, recovered septic, case emaciated

Case 62, C M, age 21 single double pyosalpinx and ovarian cyst, removal of both appendages May 13 1895 glass drainage two days, recovered

Case 63 L J age 21, single pyosalpinx and tubo ovarian abscess removal of both appendages May 22, 1895 glass drainage one day, recovered

Case 64, M B, age 24 married double pyosalpinx, removal of both appendages May 30, 1895, glass drainage died in twenty two hours, autopsy showed one kidney useless and the other acutely congested, suppression of urine

Case 65, L M age 18 single, double pyosalpinx and ovarian abscess removal of both appendages June 6, 1895, glass drainage one day, recovered, bowel badly torn

Case 66, L D, age 21, single double pyosalpinx, removal of both appendages June 17, 1895, no drainage, recovered

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IS THIS LEPROSY?

PRESENTATION OF TWO CASES

Read before the Fiftieth Annual Meeting of the Ohio State Society at Columbus, Ohio, May 16 1895

BY T C McDOUGAL, M D

NEW LEXINGTON, OHIO

I am glad that I am able to present these two very interesting cases for your examination, for the unusual circumstances under which they have developed render it important that a correct diagnosis be made, and to that end only do I direct my present inquiry and solicit your every aid

Hannah M Garey first came under my observation in December, 1894, when she was examined by the New Lexington Pension Board Drs P A Gordon and G W Clemson participated in the examination She had applied for pension as a dependent child of Geo W Garey, a deceased soldier of the 187th Regiment Ohio Infantry, and at that time she presented the following manifestations of a disease we diagnosed as anesthetic leprosy the left hand and lower forearm were swollen and rather firmly thickened, the hand and wrist being about twice the normal size The distal phalanges were all lost, except from the little finger and thumb, and the stumps were all healed The thumb nail was deformed and discolored The hand was being amputated at the radio-carpal articulation by a narrow, encircling, ulcerative process, and the work was so near completion that only the ulnar vessels and some of the tendons remained Both surfaces were covered by granulations, were bathed with extremely foul-smelling pus and were yet held in close apposition, except at the bordering skin, where some retraction had taken place in the healing process which had begun.

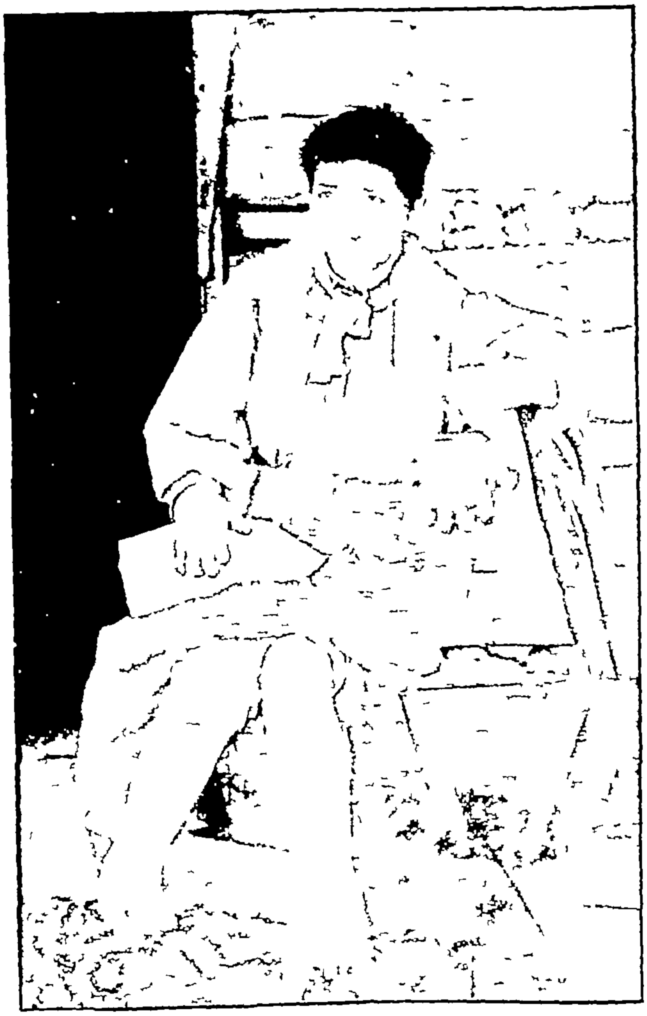
The right hand and fingers were somewhat swollen and clubbed and all the distal phalanges except those of the little finger and thumb were lost The wrist joint was somewhat deformed because of an unnatural prominence of the head of the ulna on the dorsal side Both feet were swollen and thickened and this condition also involved, to some extent, the legs, being more marked in the left From the left foot the first and second toes were entirely lost, the third toe was off at the proximal phalangeal joint and the fifth toe all lost On the plantar surface of stump of great toe was a thick dark crust covering an unhealed ulcer In the middle of the left sole was an ulcer the size of a silver half dollar which reached deep into the foot, and from which there came a very offensive discharge From the right foot the great toe was lost, the second and third were off at middle of proximal phalanx and the fourth was pointed upward so that it was considerably out of line with the others The little toe was not affected, except that it was involved in the general thickening of the foot All the affected members were more or less anesthetic, the thermal anesthesia being especially marked

There was a blister, the size of a silver quarter, on the back of right arm just above the olecranon The end of the tongue had been destroyed by ulcerations that had healed, the left side of lower lip and both wings of nose had suffered loss from the same cause and were consequently deformed, and the lower jaw had likewise suffered loss of bone, teeth and gum. Her eyes looked weak and blinking and her vision was poor

She is 18 years of age and this malady began to manifest itself, so her mother states, by abscess formations in her legs when she was about fifteen months old In two or three years the toes began to ulcerate and come off, and then the hands became involved The flesh ulcerated from the fingers leaving the blackened dry bones exposed, and these she persistently drummed on the tables and chairs until her mother cut them off with shears She menstruated moderately regularly from the time she was 14 years of age until one year ago, when menses ceased. The plantar ulcer had been a perforating one, so that when the mother used poultices—as she did—on the top of the foot they would run through, unless the foot rested on something to stop the plantar opening

January 18 of this year, I saw her again in company with Dr McTeague At that time she was sweating freely, though the house was cold, and her pulse was accelerated She complained of pain in neck and left leg from which she had been suffering much Her mother said she had lately fallen several times, limp and motionless, and that she had been having some sort of choking spells The hand was still further separated so that it hung downward when the arm was raised On the back of the hand was an extensive gangrenous blister, due to the pressure of splints used to hold the hand in position The epidermis covering the remainder of the hand had been recently shed, and replaced by the formation of new The blister on elbow had healed, and the skin marking its location was papery and harsh and completely insentient to touch or pain The plantar ulcer was healing, and covered by a thick, black, offensive crust

I next saw her February 15, 1895 At this time there was a large ulcer, with sharply defined edge, on the back of hand, corresponding in size and location to the blister seen on former visit Since my previous visit there had appeared for the first time in the history of the case—so far as we were able to learn—an eruption on the left side of neck and on the front of left leg The eruptive spots were not raised, were dark yellowish brown in color on the leg and darker on the neck They were thickly set and made with the surrounding skin a dappled appearance, which shows fairly well on the leg in the photograph Since the appearance of the eruption there have been no choking or fainting spells The plantar ulcer, after a duration of about five years, was now healed At this time the negatives were obtained from which the photographs were made, and the hand was removed and sent away for bacteriologic examination



Her younger sister Hattie is 8 years of age, and has been afflicted for about three years Her feet are clubbed and legs stocky The great toe of left foot is off at middle of proximal phalanx There is a dark crust on lower part of stump The distal phalanx of second toe is lost The right great toe is like the left The nail is lost from second toe and the ulcer which was present on the top of toe—as you can see in the photographs is now healed The little toe has been entirely destroyed and a healthy stump remains There is some anesthesia of feet and legs There was a moderately indurated swelling on outer front side of leg just above the ankle, which has almost disappeared

The hands, you see, are also affected They are thickened and chubby The thumb nails show evidence of disease The ends of index fingers are off and here an apology for nails is offered in the existence of small, dark, horny thickenings on the centers of ends of fingers On the radial side of the wrist the skin is rough, and here are a number of small wart-like elevations You will notice a number of blisters on the palmar surfaces of her hands These are accounted for by the fact that she is fond of parching corn in a skillet on the cookstove and her touch can not appreciate a destructive degree of heat, and consequently her hands are frequently burned You have seen that she is unable to appreciate any difference between the feeling of a bottle filled with hot, and another filled with cold water Her eyes are red and tearful Her voice is coarse and croaks, and she has a croupy cough at night

Both girls have suffered at times from painful nerves, and when deep abscesses formed, or when amputations began in the bones they suffered from them But the ulcerations, though reaching deep into the tissues or even destroying a member, have not been painful

Hannah walked with little discomfort on the plantar ulcer, and during the later stages of the destructive process that robbed her of her hand she suffered none, and laughed when it was being cut away

The mother insists that these ulcerations are always the result of some accidental injury They sometimes heal kindly after a variable duration, and sometimes go on to complete destruction of the part

These sisters have never been outside the State of Ohio Both parents and all the grandparents were natives of Ohio and belonged to healthy long-lived families The parents were married in 1866 There are eight children and all are healthy except Hannah the fourth born, and Hattie the last born The mother is 44 years old, and healthy The father was pensioned for sunstroke He is reported as having died of some brain trouble March 10, 1893 He had an offensive discharge from the nose and an eruption on upper lip and end of nose This trouble developed shortly after marriage and was never recovered from Physicians, who had treated him for it, called it catarrh and eczema The 187th Regiment Ohio Infantry, of which he was a member was stationed during the few months it was in service at Nashville, Tenn , and at Dalton, Kingston and Macon, Georgia

This is about all of practical importance I know, concerning these unfortunates Then let us see "where we are at," and whether or not the probabilities are that a mistake has been made in attributing lepra as the cause of all these manifestations

The most comprehensive discussion on the subject of leprosy I have found, is given by Prince A Morrow in his system of Genito-Urinary Diseases, Syphilology and Dermatology It contains the apparent truth of all I have been able to read on this subject

For the purpose of comparison, permit me to recite here the most prominent and distinguishing symptoms of the anesthetic form of leprosy as given by him the phenomena are essentially those of multiple neuritis, consisting principally of disorders of sensation and nutrition The first cutaneous manifestations of nerve leprosy are usually in the form of bullæ or erythematous spots They may not appear, however, for years later, and they may even fail altogether Analgesia and thermo-anesthesia may be present with or without impairment of the tactile sense Most of the cutaneous lesions encountered in nerve leprosy, before the mutilating stage sets in, are due to the blunted sensibility The deadened nerves give no warning through the perception of pain of the inroads of heat, cold, or other external source of injury A patient often receives severe injury as a scald or burn, unconsciously, or a pin may be thrust into the flesh without causing pain Sensibility to puncture, however, is variable, not only in different parts of the body but in contiguous spots, the same is true of sensitiveness to temperature There are frequent phenomena of disassociation Some have no perception of cold, but feel heat, and *vice versa* There is also slowness in the transmission of sensation Although the most frequent sites of the spots are the legs about the ankles, they may be found on the backs of the arms and shoulders, the elbows, the back, the abdomen, the nates and the face, they are rarely seen on the palms and soles, and never on the scalp Another form of eruptive lesion is the pemphigoid The blebs are always located more particularly on the hands and feet, on the posterior surface of the elbows and the anterior surface of the knees Many years may pass and the patient with the exception of an occasional innocuous eruption or neuralgic pain, may have no disorder of sufficient importance to awaken his suspicions as to the exceeding gravity of the disease with which he is afflicted Pemphigus blebs locate on the phalangeal articulations and ulcerate, uncovering the deeper tissues, whose consecutive disease leads to the elimination of the bone and to extensive mutilations

One of the most characteristic lesions is the so-called plantar ulcer, which is especially liable to occur in patients who habitually go barefoot The bones of the fingers and toes may be lost without ulceration by a process of osseous absorption affecting one phalanx after another, or the phalanges may become the seat of gangrene, which extends until a mark of demarkation is found and the member is spontaneously amputated The reparative process is usually prompt and complete, the stump healing perfectly, when the loss of the phalanges is only partial, the stumps may stand out at every conceivable angle, and often in the most distorted positions

Now, by the light of this symptomatology—the most prominent landmarks given on the subject, let us look at these cases Even though they have not true leprosy they suffer some disease so nearly like it in all its apparel of symptoms as to afford me ample apology for choosing the inquiry I did as the subject of my paper I certainly have never seen a single case of typhoid fever that corresponded more closely in its symptomatology to the classical description of that disease than do these cases to the descriptions I read of anesthetic leprosy

It would seem superfluous in this connection to consider eruptive diseases of the erythematous type, and the various pigmentary affections of the skin which may simulate the earlier stages of leprosy, but in which mutilations, sensory disorders or marked nutritional changes do not occur, and so would it seem superfluous to exclude by differential diagnosis those ulcerative or mutilating diseases whose evolution is unattended by dysesthesia or other disturbances of sensation, nor yet would I feel justified in occupying time in excluding diseases of the nervous system attended with disturbances of sensation, but which are not accompanied by mutilations Such diseases may furnish one or more symptoms analogous to one or more of the symptoms encountered in the evolution of leprosy, but it is far more difficult to find points of resemblance between them and the disease here manifested, than points of difference

Reynaud's disease or symmetrical gangrene is, we think, excluded by the fact that anesthesia is limited to the ischemic or cyanotic spots about to become gangrenous, and the gangrene is usually limited to a small area of the pulps of the fingers, or fingers and toes, extensive mutilations do not occur, and a peculiar characteristic of Reynaud's disease is the symmetrical distribution of the local symptoms, whether situated upon the trunk or extremities

Morvan's disease or syringomyelia (*identical*) may bear a most deceptive resemblance to nerve leprosy that has developed only in the upper extremities But syringomyelia may be excluded in these cases by the single fact that it never affects the lower extremities

I received a copy of the report of the bacteriologic examination of a portion of the amputated hand, which I will read

Treasury Department, Office of the Supervising Surgeon-General, Marine-Hospital Service
Washington, D C, March 28 1895

To the Supervising Surgeon General, U S Marine Hospital Service

Sir —I have the honor to make the following report on a specimen from a supposed case of leprosy, submitted for examination by Dr C O Probst, Secretary of the Ohio State Board of Health

The specimen presented for examination is a portion of the left hand, including the little and ring fingers The entire member is thickened to about twice its natural size

On the dorsum of the hand is an extensive superficial ulcer with sharply defined and irregular margin At the wrist, the ulceration has extended deeply through the tissues, amputating the hand at this point A similar process seems to have affected the tip of the ring finger

Sections were made and studied from several different places Four were taken from the edge of the ulcer, two from its center, and one through the skin and thickened subcutaneous tissue, including the nerve going to the little finger

All the sections disclosed a general hypertrophy of the parts and a large overgrowth of connective tissue Some of the specimens from the edge of the ulcer showed the histology of the specific granulomata A thickening of the blood vessel walls was noticed in the subcutaneous tissue

All the sections were stained for lepra bacilli, with negative results Those sections containing giant cells were also stained for tubercle bacilli None were found

The disease, therefore, in my opinion is neither leprosy nor tuberculosis, which, by exclusion, throws some weight upon the suspicion of syphilis Very respectfully,

(Signed) M J Rosenau, P A Surgeon, M H S

Respectfully forwarded to the Supervising Surgeon-General

(Signed) J J Kinyoun, P A Surgeon, M H S

(Copy)

As granulomata occur in the new tissue growths of leprosy and also in tuberculosis, as well as in syphilis, we do not understand the report to state the specific granulomata to be pathognomonic of syphilis

Because no lepra or tubercle bacilli were found, he concludes the disease is neither leprosy or tuberculosis, and therefore must be syphilis

Relative to this, I again quote Morrow (New York

Medical Journal, July 27, 1889) who says "The bacillus is not found in the chronic sores or necrosed tissues and bones of the anesthetic leper Numerous and repeated examinations of sections of an amputated finger showed no bacilli " The same author in his text-book published in 1894—only last year—states with his first sentence on the diagnosis of the anesthetic form of leprosy "While the identification of the lepra bacillus in the tissues is rarely practicable in nerve leprosy, yet the invariable presence of, anesthesia in established cases constitutes a diagnostic element of almost pathognomonic value" And similar statements are made by other authors Did not, therefore, our esteemed bacteriologist go beyond the pale of scientific knowledge in expressing this opinion, and into the realm of speculation in concluding it was therefore syphilis?

I think that we have in these cases such a history and combination of symptoms as have never been approached in any case of syphilis any of you have ever seen in practice, or have ever read in a report It is true the father had a disease of the nose which, so far as the description we have of it goes, might have been syphilis, lupus, or some other disease But as the first symptom of leprosy is so often an affection of the nose we think we are justified, in the light of these subsequent developments, in our impression that it was of leprous character, and that somebody, somewhere and at some time, probably in the sunny South during the war, communicated to him this leprous malady, and that he is the source from which came this wreckage Admitting that syphilis might show itself by such unprecedented manifestations in a single case, it multiplies the improbabilities a hundred fold that two such unusual cases should occur together and be alike—for considering the difference in duration they are as nearly alike as two cases of any disease usually are If this be syphilis, is it inherited or acquired? If inherited, how did the other children escape it? There are three children older than Hannah, and three between Hannah and Hattie who are healthy, evidently free from any taint, as is also the mother If acquired, again I ask why should all but two escape, for syphilis is many times more contagious than leprosy? The mother, more endangered than the rest, would almost certainly have contracted it

It must be admitted that there is much to be said in favor of the view that these cases are actually lepra We have the spontaneous amputations in both the upper and lower extremities, the plantar ulcer, the dysesthesia, the pemphigoid eruption on back of elbow with its resultant anesthetic scar, the thick, black, hard offensive crusts that form on the ulcerous sores, the distorted direction of the toes, the ulcerations of the nose and mouth, the weak eyes and peculiar voice, and the eruptive colorations It is the exception and not the rule that so many evidences of the disease are found Moses, of old, would have dealt with them as lepers on the discovery of far fewer and less characteristic symptoms than these, and without his camp would their habitation have been

If I have wearied you with a paper of too great length, I have done so because impressed with the practical importance of the subject For there is no doubt but that leprosy is on the increase, not only in other countries, but also in our own If what I have shown you is leprosy, let us do what we can to set aside all ignorant fear of the malady In the face of a disease which has for ages been accounted one of the most dreadful of plagues, it is not surprising that the public should be stricken with panic On the other hand, let us profit by the experience of the past and urge the adoption of measures that will be certain to prevent its spread If what you have here seen is not leprosy, let us free these people from the odium of such suspicion If it is syphilis, let us cure it And if neither, let us find out, if possible, what the disease is that has thus wrecked the life of one, and so threatens another with the same fate, and in which decomposition, by such a frightful anticipation, has wrought its work without waiting for the grave

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STATE PROVISION FOR EPILEPTICS

Read before the Medical Society of Virginia, Sept 4, 1895

BY WILLIAM FRANCIS DREWRY, M D

FIRST ASSISTANT PHYSICIAN CENTRAL STATE HOSPITAL MEMBER AMERICAN MEDICO PSYCHOLOGICAL ASSOCIATION AMERICAN MEDICAL ASSOCIATION MEDICAL SOCIETY OF VIRGINIA ETC
PETERSBURG, VA

The purpose of this paper is to direct attention to that neglected and abandoned class of defectives, known as epileptics, and I plead from the standpoint of physician, humanitarian and political economist, for a betterment of their condition It is, however, beyond my power to convey in written words, a proper idea of the abject wretchedness of many of these unfortunates I hope others may be convinced, as I have been, that no other afflicted beings are in such urgent need of special institutions for their care and treatment

Epilepsy is to the physician, the statistician and the sociologist, alike, an unknown and unknowable factor As a concomitant of idiocy,[1] insanity and crime,[2] this blight upon the human race assumes enormous proportions

PROGNOSIS

The etiology and pathology[3] of epilepsy being so little understood, the treatment must be more or less empirical However pessimistic it may seem, the prognosis of the disease, so far as permanent recovery is concerned, is seldom favorable[4] No disease is more intractable to therapeutic measures alone The larger one's experience with it becomes, the deeper this conviction is fixed Few chronic diseases, however, are more amenable to improvement, provided judicious treatment, prophylactic, medical and moral, is faithfully carried out The insidiousness of its inception, the subtlety of its progress, its practicable incurability, its hereditary nature, its demoralizing effects, combine to make it one of the most dreaded maladies And, in the language of Sachs "The frequent development of dementia, idiocy or of epileptic insanity, in epileptics, makes the outlook gloomier still "

PREVALENCE OF EPILEPSY

It is certainly a very widespread disorder No accurate data can be procured upon which to estimate the proportion of epileptics to the general population For obvious reasons, little reliance can be placed on the census reports In this country the usually accepted ratio is 2 per 1,000 of the population Some authorities, however, think it is much greater than that[5] One hundred and thirty five thousand epileptics[6] What an enormous army of unfortunates distributed throughout our land, a great majority of whom are in a more or less helpless con-of this great colony are to "provide gratuitously the humane, curative, scientific and economical treatment and care of dependent sane epileptics" It is thought that this institution will in a few years become self-supporting

The last Legislature of Massachusetts, just and generous, authorized the establishment and maintenance at the public expense of a hospital home for epileptics

The hospital cottage at Baldwinsville,[16] Mass, though a private benevolent institution for non-insane epileptic children, receives a liberal donation from the State

In California,[17] Pennsylvania,[18] Maryland,[19] Minnesota and Michigan,[20] limited provision, on the industrial and educational plan, has been made at the respective State institutions for the feeble-minded, for the care of sane epileptics Illinois, Wisconsin and other States are being urged by their respective medical societies and boards of charities to erect separate institutions for epileptics

VIRGINIA'S DUTY TO HER DEPENDENT EPILEPTICS

Will Virginia, upon whose soil was erected the first hospital on this continent exclusively for the care of the insane, and who built the first and still has the largest asylum for insane negroes in the world, be any longer derelict in her duty to her poor epileptics? Will she refuse to respond to the cry of these unfortunates? I believe not

The State care of epileptics is a subject worthy of the most serious and earnest thought and is of the deepest interest to all the people Whether this care should consist in a hospital, pure and simple, or a colony on the plan I have outlined, or whether special accommodation should be provided at institutions for other defectives—the insane or the feeble-minded—are questions for mature consideration

SUGGESTIONS

In an article published in the *Virginia Medical Monthly*, September, 1894—"Care of Epileptics on the Colony Plan,"—I advocated the State care of all dependent epileptics, in an institution exclusively for them I reiterate the opinion expressed in that paper, viz, that a farm-colony, conducted on the industrial and educational plan and provided with every facility for the most scientific medical treatment of the patients, as sketched in the foregoing pages, would meet the requirements better than any other method yet suggested *It is feasible, it is economical, it is humane It has been tried elsewhere and demonstrated beyond question to be a practical success*

Who should reap the benefits of such an institution?

1 The epileptics now confined in the hospitals for the insane By removing these, 200 in number, sufficient room would be gained at the institutions to accommodate probably all the insane of the State in need of care and treatment, at least for a year or two

2 All the epileptics now in the county and city poorhouses—certainly as many as 200

3 Dependent sane epileptics, each county and city to have at the colony a number of patients proportioned to its population

4 A limited number of pay patients, probably, who may be in pressing need of special treatment and care

5 Both white and colored epileptics—separate and distinct provision being made for each race

To determine the question of epilepsy, proper legal proceedings should be had as in the cases of insanity The State, however, is sadly in need of a better law regarding the commitment of the insane

THE DUTY OF PHYSICIANS

Our lawmakers need to be reminded of the necessity and humaneness of special provision for epileptics Let us, Fellows of the Medical Society of Virginia, with a broad and comprehensive devotion to the general good and to individual happiness, use our best efforts in the creation of a just public sentiment regarding this matter and, as far as lies in our power, try to "raise the fallen, cheer the faint and heal the broken-hearted" Public sentiment, the potent power that accomplishes great deeds of mercy and benevolence, never arrays itself against the afflicted and suffering Only the ignoramus or the narrow-minded bigot will dare discourage any effort to help such unfortunates If there be any such, tell them the old proverb "Whoso stoppeth his ears at the cry of the poor, he also shall cry himself, but shall not be heard"

It is not, I believe, Utopian to hope that in the near future our State will awaken to a recognition of her duty to her epileptics, and see the wisdom of making that provision for them which is clearly demanded by every consideration of justice, equity and philanthropy †

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† Immediately after the reading of the above paper, some discussion took place and the following resolution was offered and unanimously adopted

"*Resolved*, That it is the sense of the Medical Society of Virginia that the State should make some special provision for its dependent epileptics

"*Resolved*, That an epileptic institution (or colony), conducted on the industrial plan, commends itself to this society

"*Resolved*, That a committee of five be appointed by the Chair, two of whom shall be the present President (Dr R J Preston) of this society and the author of the paper (Dr William F Drewry), who shall present this matter to the next Legislature of Virginia and try to induce that body to give it that attention it justly deserves

REFERENCES

[1] Dr E A Osborne, Superintendent of the California Institution for the Feeble Minded, is authority for the statement that in his experience, epilepsy exists as a predisposing or complicating cause of feeble mindedness in over 60 per cent of all cases [Institution Bulletin, Feb 1, 1891, page 18] Mr Miller, Superintendent Nebraska Asylum for Feeble Minded says he believes that epilepsy in some form permanently enfeebles more minds than all other complications [*Charitable Observer*, Jan 1, 1894]

[2] According to Richter, most crimes, especially murder, burglary, common theft, embezzlement, resistance of State power, come by epileptics or in those with a tendency to epilepsy [A MacDonald in "Abnormal Man" October, 1893 pages 51 and 77]

[3] Hirt, in his admirable book on 'Diseases of Nervous System," says "The structure as well as the physiologic functions of the human brain are, up to the present time, so little understood that we are far from having any sure basis upon which to lay the foundations of a cerebral pathology Epilepsy is a fundamental neurosis the seat of which is still unknown"

[4] The best authorities, Peterson among them, think that no more than 3 per cent of idiopathic epilepsy in general practice get well Sachs has seen but very few cases of absolute cure of genuine epilepsy

[5] Osborne and others

[6] Peterson thinks that the proportion of insane epileptics to the sane epileptics is very small, much less than 10 per cent [JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Sept 30, 1893]

[9] In an admirable paper on the "Provisions for Epileptics" read at the National Conference of Charities and Correction, 1894 Hon W P Letchworth, of the New York State Board of Charities, said that there are charity workers whether medical or lay, who have found it almost impossible to obtain employment for those who suffer from fits, with the result that the workhouses, alms houses, and lunatic asylums become the only places where these unfortunate people can be received

[10] It has been repeatedly stated by writers that Handel the great musician, Dostojewsky, the author of "The Idiot," Petrarch, the poet and writer Napoleon Bonaparte and Julius Cæsar, the renowned soldiers Mahomet the Prophet, St Paul, the great apostle, and the erratic Byron were all sufferers from this "thorn in the flesh"

[11] Rev John Bost a Lutheran preacher was the name of this great benefactor His institution is still in a flourishing state and reflects much credit upon its creative genius

[12] Von Bodelschwingh, a Protestant pastor, started his institution in Westphalia with one cottage and a garden, and twelve patients

[13] Dr William Alexander, aided by the liberality of a wealthy citizen of England, established in 1889, the Maghull Home near Liverpool, where a limited number of epileptics receive care and treatment in accordance with the most advanced theories The results of this praiseworthy movement have been so gratifying that efforts are being made to enlarge its capacity

In Surrey, the Countess of Meath, prompted by her generous and benevolent spirit has established a pleasant refuge, having a capacity for about fifty, for epileptic girls and women

In London there are one or two hospitals where recent cases of epilepsy are received or given special treatment

The National Society for the Employment of Epileptics has purchased a farm in Buckinghamshire, upon which there are in course of erection suitable cottages to accommodate several hundred (eight hundred I think) sane epileptics Separate provision will be made for adult males, adult females and children Here will be provided "a home for those necessitous epileptics who are able and willing to work but for whom their friends are unable to procure employment on account of the affliction which bars their admission into ordinary fields of industry"

[14] In 1892 there was built at Wilhelmsro in Sweden the nucleus of a home for epileptic children The methods adopted there are those in vogue in La Force, France

[15] There is only one State hospital exclusively for epileptics in this country—the one at Gallipolis Ohio In 1890 a bill favorable to the establishment of a hospital for epileptics was passed by the Ohio Legislature The corner stone was laid Nov 12 1891 To General Brinkerhoff President of the State Board of Charities, belongs the greatest credit for this noble charity, for he was untiring in his efforts to get the authorities to recognize the wants of the epileptics of his State

[16] This was the first charity institution for epileptics in this country It was opened in 1882 as a private benevolent establishment with nine patients Now there are more than one hundred little sufferers domiciled there

[17] About one hundred epileptic children are cared for in the Home for the Feeble Minded The able Superintendent, Dr Osborne writes that "the demand for admission of epileptics has been steady, persistent and far in excess of our means to provide for their care"

[18] The St Clement s Hospital for the care of indigent sane epileptics of Philadelphia maintained chiefly by private donations has been in existence for three or four years and is doing a good work on a small scale Steps are now being taken looking to the ' organization of a colony farm convenient to Philadelphia on which can be erected necessary buildings, including an infirmary, workshops and separate small cottages wherein the patients according to their mental and physical conditions can be cared for in the most approved manner"

At the Elwyn School for Feeble Minded about one hundred epileptic children are being cared for in a separate building The State Lunacy Commission in 1893 urged the Legislature to make separate suitable accommodation for epileptics, upon an industrial basis

[19] The Maryland Institution for Feeble Minded will soon erect a building especially for poor epileptics Under the auspices of the King s Daughters a small farm colony for epileptics is being conducted near the city of Baltimore

[20] Michigan has begun the erection of farm cottages for her epileptics and feeble-minded, to be conducted on the industrial plan

Surgeon-General Sternberg's Annual Report

The Report of the Surgeon General of the Army for the year ending June 30, 1895, presents a statement of the disbursements made from various appropriations and then discusses matters of interest to the Medical Department The following is a synopsis of the report

Medical and Hospital Supplies—During the past year a new edition of the Supply Table of the Medical Department was issued, in which such changes were made as seemed called for by the progress of medical science Medical and surgical chests issued some years ago for field service were refitted and modified in their arrangement as suggested by experience in their use Recently published medical works were sent to military posts with the view of keeping medical officers informed of current advances in medicine and surgery The old system of weights and measures has been disused and the metric system substituted The use of the latter was made obligatory on medical officers from Jan 1, 1895 Post surgeons have been directed to set aside in their hospitals a special room as an operating room, or when necessary to submit estimates for the construction of such a room The necessary appliances for fitting up these operating rooms in accordance with the requirements of modern aseptic surgery will be provided With a similar end in view the supply department is issuing iron bedside tables with non absorbing tops of heavy glass for use in the wards

During the year a board of officers was convened by me to investigate and report on the form of litter found to be best suited for Army use having in view economy, simplicity of construction, durability, lightness and adaptability for the services required This board devised a new model which differs from that formerly accepted in weighing only seventeen instead of twenty four pounds The slings accompanying it are simple and detachable It is considered that this new litter will simplify the litter drill and not only lessen the burden of the bearers, but contribute materially to the comfort and safe carriage of those who have to be transported by them

Library—There were presented to the library during the year 517 books and 7,792 pamphlets and journals Total number of books now in the library, 117,263, of pamphlets, 193,031 Volume XVI of the Index Catalogue includes from "W" to "Zythus" and forms a volume of 1,104 pages It completes the first series of this work The manuscript of volume I, new series, is nearly ready for the printer, the usual appropriation having been made for this volume

Army Medical Museum—The total number of specimens in the museum at the end of the fiscal year was 32,889, of which 623 were received during the year The museum was visited during the year by 52,094 persons

Army and Navy General Hospital, Hot Springs, Ark—The officers' division contains 16 beds, the average occupancy of each for the year being only 120 days The greatest number of officers under treatment at one time was 10 The men's division contains 64 beds Eighty-four men were treated during the year 33 of whom continued under treatment at its close Of the 51 completed cases, after deducting 6 known to have been discharged at their posts later, the percentage of recoveries was 70 6 Pulmonary cases are not improved by treatment at this hospital

Medical Officers—There were 98 medical officers reported as having been on duty with scouting parties and on other field service during the year

Promotions during the year Two deputy surgeons general with the rank of lieutenant colonel, to be assistant surgeons-general with the rank of colonel, two surgeons with the rank of major, to be deputy surgeons general with the rank of lieutenant colonel, two assistant surgeons with the rank of captain, to be surgeons with the rank of major, eight assistant surgeons with the rank of first lieutenant, to be assistant surgeons with the rank of captain Deaths none Retirements one assistant surgeon general with the rank of colonel one assistant surgeon with the rank of captain, for disability

Army Medical Examining Boards were convened for the examination of officers for promotion to the grades of assistant surgeon with the rank of captain and surgeon with the rank of major, but no board was necessary for the examination of candidates for position in the Medical Department of the Army as the number of assistant surgeons in service had not been reduced to 110, the number allowed by the Army Appropriation Bill for the year ending June 30, 1894.

Hospital Corps—The character of the *personnel* has improved Great care is taken to investigate the character and previous record of every man offering for enlistment, reënlistment or transfer from the line with a view to maintain a high standard of sobriety and efficiency A considerable reduction in the number of privates has taken place during the year, owing to the abandonment of a number of military posts On June 30, 1895 there were only 530 privates as compared with 585 at the end of the preceding year No examination for appointment as hospital steward was held during the year as the number of stewards available for assignment from discontinued posts rendered such examination unnecessary, nor is it probable that an examination for the position of hospital steward will be held during the current year Thirty-three candidates for assignment as acting hospital steward were examined in October, 1894 Twenty three were found qualified and have since been detailed, ten failed to pass Owing to the greater number of casualties in the corps of acting hospital stewards it is probable that an examination for a few vacancies will be held during the coming fall

The companies of the Hospital Corps at Fort Riley, Kansas, and Washington Barracks D C, not only afford opportunities for instruction which can not be given at the posts, but serve as depots from which men can be drawn in emergency to supply the needs of active service This advantage was particularly shown in the railroad riots of the year

Examination of Recruits—The number of applicants for enlistment and reënlistment during the year was 16,586, white 15 625, negro 911, Indian 50 Of these 7,481, or 45 1 per cent were accepted, including 44 4 per cent of the white, 54 8 per cent of the negroes and 94 per cent of the Indians Of the whites 51 4 per cent were rejected while 4.2 declined enlistment, of the negroes 43 2 were rejected and 2 per cent declined Diseases of the eye caused the rejection of 7 77 per cent of the applicants, under weight and imperfect physique 11 46, minority 1 43, general unfitness and undesirable 3 13, bad or doubtful character or unsatisfactory references 3 14 imperfect knowledge of the English language 1 66, illiteracy 0 67

In every thousand of the accepted recruits there were 927 whites, 66 7 negroes and 6 3 Indians, and of the 927 whites 607 8 were natives of the United States 94 64 of Ireland 94.24 of Germany 31 68 of England, 16 97 of Canada 15 50 of Sweden 11 89 of Denmark and 11 23 of Austria The average age of the whole number was 26 8 years The average height was 67 38 inches, that of the native American 67 50, of the foreign born 67 18, of the negroes 67 21 The average weight was 145 88 pounds, native whites 145 06, foreign born 146 77, negroes 149 19 The expansibility of the chest was from 34 27 to 37 17 inches, native whites 34 08 to 36 99, foreign born 34 63 to 37 57, negroes 34 25 to 36 83

Identification of Deserters —From January 2 to August 17, 1895, the whole number of identifications was 66, including 8 cases of men who had left the service The 66 represented the "repeating" element of 2,493 recruits whose outline-cards had been examined i e, of every thousand recruits enlisted from civil life 26 47 were identified through the outline card records as deserters, military convicts or otherwise bad characters

Health of the Army —The health record of the Army for the calendar year, 1894, is a most satisfactory one Taken as a whole, it may be said to be the best annual record ever consolidated from returns sent in by U S Army medical officers, for although the death rate is a fraction higher than the lowest rate ever recorded, the other rates are by far lower than they have ever been before in the history of our Army The number of admissions per thousand of mean strength was only 1,089 73 as compared with 1,289 04 during the calendar year 1893, and with 1 376 89 the average of the years of the previous decade The rate of admission for injuries was as large as usual, but the reduction in the number of cases of disease was most gratifying, the admission rate having been only 845 42 per thousand of strength as compared with 1,048 01 and 1,121 06 respectively for the previous year and the years of the previous decade The rate of non efficiency or constant sickness was only 34 49, contrasting favorably with former reports, 40 15 in previous year and 42 51 as the average of the previous ten years, and the average number of days lost on account of disability by each man of the Army was only 12 6 as against 14 7 in 1893 and 15 5 in the previous ten years That this reduction in the sick rates was not effected by the discharge of sick men on certificates of disability is readily seen, for the number of men so discharged was less than in any previous year, 13 30 per thousand of strength including 2.89 for injuries, as against 14 93 in 1893 and 26 48 as the average annual rate of the ten years immediately preceding The lessened rates can be attributed only to the greater care in the selection of recruits and in the preservation of the men from insanitary influences subsequent to their enlistment

The death rate from all causes was 6 69 per thousand of strength as against 6 91 and 8 22 for the previous year and decade The death rate from injury was 2 13, so that the rate from disease was 4 55 as compared with 4 01 of the previous year, 3 95 of the year 1889 the lowest recorded rate for disease, and 5 64 the average rate of the years of the previous decade

Infectious diseases, general and local, gave an admission rate of 273 51, or one-fourth of total admissions, while causing one third of the non-efficiency, showing in this that although the rates have been much reduced this year there is considerable room for improvement by the suppression of infec tion To the high rate of these infections, venereal diseases contributed 80 43 per thousand of strength, while malarial diseases gave only 74 72, a notable fall from 114 50, the average of the previous ten years Injuries took second place as causes of admission with a rate of 244 21, diseases of the digestive system third, with 237 23, and of the respiratory system fourth, with 79 76

As disabling factors the general and local infections were most prominent, causing 12 07 of the Army rate of non-efficiency, 5 03 of this was due to venereal affections, and only 1 88 to malarial infections The constant disability due to injuries was equal to 7 88 per thousand of strength

The absolute number of discharges for disability was 368 as compared with 413 in 1893 Eighty of these were caused by injury, 49 by diseases of the nervous system 44 by consumption, 43 by diseases of the locomotor system, 86 by venereal disease, and 34 by diseases of the organs of special sense

The deaths numbered 185 as compared with 191 in the previous year Fifty nine of these were due to accidents, 49 to infectious diseases, general and local, 20 of these were due to typhoid fever and 17 to consumption, diseases of the nervous system 24, of the respiratory organs 19, of the circulatory system 15 Eight deaths were caused by alcohol and its direct results

The mean strength of the Army during the year according to medical reports was whites 22,904, negroes 2,086, Indians 386, total 25,376 The admission rate of the negro troops was considerably less than that of the white soldiers, 811 60 as compared with 1,116 44, and this lower rate was due to the relative freedom from disease, for their admission rate for injury was as *high* as that of the white troops Their number constantly sick was 25 93 per thousand while the corresponding rate among the whites was 35 18, and the average number of days lost by each on account of sickness or injury was respectively 9 5 and 12 8 The rate for discharge also was lower among the negroes, 9 40 as compared with 13 56 among the white troops There was little difference in the death rate of the two races This is the most favorable showing yet made by the statistics of sickness among the colored troops of our Army

The number of Indians was so small that it is unnecessary to dwell on their statistics Their death rate was exceedingly high, 20 27 per thousand, due as in previous years to consumption, pneumonia and injuries

Health of the Military Departments —The admission rates of the military departments varied from 713 49 per thousand of strength in the Department of Columbia to 1,470 94 in the Department of Texas The light sick rate of the negro troops mentioned above, was particularly marked in the Departments of Dakota and the Colorado, where the admission rates were only 656 31 and 665 63 respectively In the Department of the Platte, on the contrary, the negro admission rate, 1211 12, was higher than the Army average In Texas, which had the highest admission rate, and in the Columbia which had the lowest, there were no negro troops The two departments last named had also the highest and the lowest rates of non efficiency or constant sickness, 50 27 and 23 56 daily sick per thousand of strength The Departments of Dakota and California had 28 79 and 30 68, the rates of the other departments did not differ much from that of the Army as a whole The death rates varied from 4 80 in the Department of the Colorado to 13 99 in Texas In the Departments of Dakota and California the death rates were lower than the average of the Army, 6 69, in the other departments they were higher The rate of discharge for disability was lowest, 6 76, in the Department of the Platte, and highest, 24 22, in the Department of Texas In the others it did not vary much from the average The Department of Columbia had the best record for the year, the Department of Texas the worst

The Highest and Lowest Rates at Individual Posts —As noted in summarizing the statistics of sickness in the military departments, the post of Key West Barracks had the highes admission rate, 2,226 89 per thousand of strength This pos was reestablished in 1893, during which year its rate was bu slightly in excess of that of the Army The high rate of th past year was due to an epidemic of dengue Only tw other posts had the admission rate for the year in excess o two entries per man of the average strength, Camp Eagl Pass and Fort Myer During the previous year no less tha ten posts had such excessive rates and among them wer three of the largest in the country, Columbus, Jefferson Bar racks and Davids Island Columbus Barracks had the high est rate of non efficiency, 66 66 per thousand of strengt This, however, must be considered as a great improvemen in the record of this station as, in the five years immediatel preceding, its rates varied from 71 98 to 92 74 Three othe posts had more than 6 per cent of their strength constantl sick, Key West Barracks, Camp Eagle Pass and Fort Har cock The first in 1893 had a rate but slightly larger tha the average of the Army, but the others have always ha high rates Among the larger posts, Fort Custer, Va couver Barracks, Fort McPherson and Madison Barracks ha the lowest admission rates during the year, and among th smaller posts, Forts Mason and Trumbull Fort Custer an Madison Barracks had the smallest rates of non efficienc among the larger posts The constant sickness at the fir named was less than 1 per cent Forts Yellowstone, Trun bull, Stanton, Canby and Mason had the best records in th respect among the smaller posts

Diphtheria —At Fort Yates, sixteen cases were reporte from the old and crowded infantry barracks, while the me in the light and roomy cavalry barracks were exemp Every year for several years back, diphtheria of a dead type has visited one or more of the families of enlisted me at West Point, N Y This year has proved no exception one family the mother and six children were affected, o of the latter died on the morning after medical attendan was called in In another family four children were affecte Of these eleven cases, ten recovered under treatment antitoxin

Typhoid Fever —During the calendar year 152 cases, which 20 were fatal, were reported This does not diff from previous annual reports Fort Sam Houston had cases Fort Sheridan 24, Fort Leavenworth 11 Regarding the disputed question as to the nature of the fever sometimes reported as "Texas fever," Major L M Maus has contributed a study of the cases at Fort Sam Houston which leads him to the conclusion that the fever so reported is an atypical enteric fever A case of this Fort Sam Houston fever imported into Fort Clark was studied by Major H S Kilbourne and shown to be one in which enteric fever was complicated with malarial infection Captain W B Banister reports the fevers at Fort McIntosh as enteric The reports of these medical officers are of interest and value

Anthrax—Lieutenant C C McCulloch furnished reports of two cases of this rare and fatal disease in the human subject The persons affected were civilians in Rio Grande city

Diarrheal Diseases were not unusually prevalent Camp Eagle Pass and Forts Hancock and Clark had the highest rates The cases at the last mentioned post were complicated with malarial infection

Malarial Diseases—The admission rate was 74 72, as compared with 93 64 in 1893, and 114 50 the average annual rate of the preceding decade Usually the Department of Texas has the highest rates, but during the past year the Department of California had the highest relative prevalence The exposure of the troops during the railway riots of July and August, 1894, was undoubtedly the cause of this increased prevalence in the Department of California

Rheumatic Affections—The rate for these affections was somewhat less than during the previous year The cases were evenly distributed in the departments

Venereal Diseases—The admission rate for these diseases in the Army was 80 43 for the year causing a rate of 5 32 constantly sick per thousand of strength and occasioning 36 discharges and one death The admission rate is higher this year than it has been for a long time In 1893 it was 78 08, in 1892, 76 73, in 1891, 72 46, in 1890, 75.22, and the average annual rate for the decade ending with the last mentioned year was 79 09 Although the number of admissions was greater than usual during the past, the number discharged for disability was considerably less, 36 as compared with 53 53, 46 and 71 respectively in the four years immediately preceding These diseases were less frequent among the negroes than among the whites or Indians, the admission rates being respectively 47 46, 82 21 and 152 85 One seventh of the whole number of cases owed their origin to syphilitic infection and had an average duration per case of 40 17 days, one sixth to chancroidal infection with an average duration of 34 71 days, and over two-thirds to gonorrheal infection with an average duration of 20 70 days

Alcoholism—The prevalence of alcoholism in the Army continues to decline The admission rate for the past year was 30 94 per thousand of strength as compared with 33 97, 37 23, 40 01, 40 73 and 41 41 in the five preceding years and with 56 68 in the decade ending with 1889 Again, in 1890 no less than seventeen posts had more than 10 per cent of their average strength under medical care for drunkenness, in 1891, eleven posts, in 1892 ten in 1893, seven, and during the past year only four Captain W H Arthur reduced the statistics of alcoholism at Vancouver Barracks by dealing with drunkenness as with acute poisoning The stomach was emptied by the stomach pump and washed out with a warm 2 per cent soda solution after which the patient was given a bowl of hot beef extract with cayenne pepper He was then generally able, although perhaps unwilling, to go to duty

Consumption—Seventy-five men were admitted to sick report during the year for consumption, 44 were discharged and 17 died The admission rate per thousand of strength was 2 96 as compared with 2.85 in 1893, 4 34 in 1892 During the past three years consumption has been more prevalent in the Army than usual, on account of the susceptibility of the Indians to this disease

Injuries—The admission rate for injuries per thousand of strength was 244.21, with a total of 80 discharges (26 of which were for hernia) and 59 deaths The rates for the various races did not vary much from the average nor does that of the past year differ much from those of the preceding decade Ten homicides were reported—5 whites 3 negroes and 2 Indians, 18 suicides—15 whites, 1 negro and 2 Indians

The Influence of Age Arm of Service, Nativity and Length of Service on Liability to Disease—The report contains a series of tables based upon the statistics of the calendar years 1890–95, which show the relation of certain specified diseases and classes of disease to arms of service length of service, age, and country of birth of the soldiers comprising the Army The figures given in the tables are the average annual rates per thousand of strength for the period stated The change in the *personnel* of our small Army takes place so rapidly on account of the short term of service, discharges by purchase, desertion and other drains that the ratios may be regarded as the annual rates of an army of 135,338 men instead of the average annual rates of one of 27,067 for a period of five years These tables are therefore of greater value than those formerly published, although the absolute numbers under many of the headings are yet too small to give satisfactory ratios

Troops on Active Service—During the period of the railroad riots, July 3 to 18, 1894, 10 troops of cavalry, 4 batteries of artillery and 23 companies of infantry operated from a camp on Lake Front, Chicago, Ill A hospital of 20 beds was established The wards were floored and furnished with field cots, blankets and mosquito bars Outlying detachments serving without attached medical attendance were visited daily by a medical officer who held sick call and telegraphed to the field hospital for an ambulance in case it was found necessary to send in any of the sick for care and treatment

About the same time 2 companies of cavalry, 5 of artillery, 1 of infantry and 3 of the Marine Corps were concentrated at Sacramento, Cal The dining room of the railroad depot was converted into a hospital This command suffered much from malarial fevers in August

Classification of Diseases—Until recently, the classification of diseases and injuries used by the Surgeon General's office was based on that of the College of Physicians and Surgeons of England This system which was adopted a number of years ago is now inconsistent in many points with our present knowledge of the causation and processes of disease Such divisions and subdivisions as zymotic, miasmatic, enthetic, zoogenous, etc, belong to a past era in the progress of medical knowledge A new system of classification of the causes of disability has therefore been drawn up and has been used in the statistical tables presented with this report

Uniformity in Medico-Military Statistics—An International Commission of military medical officers met in Buda Pesth in September, 1894, under the chairmanship of Lieut Col J S Billings, Deputy Surgeon-General, U S A, and came to an agreement as to the character of the statistics to be published for comparative purposes by each of the countries participating in the convention A series of ten international statistical tables were issued for the consideration of the various military medical departments and for adoption if approved These tables have been examined by the Surgeon General and approved with certain modifications, the chief of which is the consolidation of the second with the third, and of the sixth with the seventh, as giving a better view of the facts represented The Commission suggested that the various departments begin publication with the statistics of the calendar year 1895, but as all the needful data were readily available, the Surgeon-General submits with his report the statistics of the past year in eight tables such as will satisfy the requirements of the Commission and permit of ready comparison with the medical statistics of other countries

Surgical Operations—The reports of operations performed show that medical officers are fully alive to the requirements of modern aseptic surgery, and even at isolated and frontier posts have, in the operations they have been called upon to perform, endeavored to carry out the principles of asepsis with the apparatus at hand Many interesting cases have been reported, particularly in the line of abdominal surgery Among them are ten cases of typhlitis or abdominal abscess, of which six recovered after operation, three died notwithstanding operative interference, and in one case the perityphlitic condition was not recognized during the life of the individual

Quarters—Most of the suggestions of medical officers during the past year have been directed to the prevention of over-crowding and the improvement of ventilation Crowding was noted specially at St Francis Barracks, Forts Sheridan and Sill, defective ventilation at Angel Island, Fort Robinson and Vancouver Barracks Over-crowding was reported in some of the guard houses, as at Madison Barracks and Forts Myer and Wingate At the first mentioned the guard room gives only 384 cubic feet to each of the guard and from 200 to 324 to each of the ordinary number of prisoners At the last, the air space per man in December, 1894, was only 217 feet

Drainage, Sewerage, Latrines etc—Faulty drainage is mentioned only at a few posts At Fort Barrancas the low ground in front of the post is covered with undergrowth, the ditches draining it having become more or less clogged

Past experience is cited as having shown that this has an important bearing on the prevalence of malarial diseases at the post and also upon mosquitoes which rise in swarms when the low ground is saturated The swamp in the northeast corner of the reservation at Washington Barracks is also noted, but it is represented as being more harmful to the adjacent citizens than to the troops The cellars in some of the quarters at Forts Niagara and Porter are occasionally flooded Since the occupation of the new post of Fort Brady, Mich the post surgeon has repeatedly called attention to the faulty drainage which permits the ashpits in the barracks to be flooded with water, particularly during the snow melting of spring The Locust Street sewer continues to discharge on the reservation at the Presidio of San Francisco, Cal

Water Supplies—Deficient supply was reported from four posts At Fort Assiniboine, Beaver Creek from which the supply is derived, became dry in August, 1894 Water for drinking and other domestic purposes was obtained from a spring in the neighborhood At Fort Hamilton and Columbus and Jefferson Barracks the deficient supply was remedied by improving the connections with the city mains from which each draws its water The question of water supply at Forts Reno and Clark remains unsolved At the former post the drinking supply is condensed from the ice machine or waggoned from Caddo Springs The results of an examination of the water from a boring in the river bottom in August, 1894 did not differ from those of analysis of well water made in May of that year The water was too hard for potable or domestic use At the latter post the Las Moras Spring was twice flooded by storm water in August, 1894 In May, 1895, the masonry approaches of the foot bridge below the springs were removed These had up to that time obstructed the channel of the creek in times of high water and favored the overflow of the springs by back water

At Fort Myer a temporary solution of the water problem has been effected by pumping water from the Potomac near the aqueduct bridge, a contaminated supply subsequently purified by the use of Columbia and Pasteur filters in the barracks and quarters The artesian well is understood to have been non-productive so far Suggestions of the prevalence of typhoid fever due to impure water supplies have been reported from Forts Leavenworth and Custer At the one post the unsedimented and unfiltered river water supplied by the Leavenworth city water works has often been condemned by medical officers The question of a pure water supply has been under consideration by the authorities of the military prison and some borings were made, the water from which was regarded on analysis as being suitable for use if freed from suspended earthy particles At Fort Custer the foul condition of the water supply is said to be due to the offal and drainage from the slaughter house of the Crow agency on the Little Bighorn River and from the use of the water for irrigating purposes before it reaches the post

Food—Very little adverse criticism on the food of the soldier or the methods of its preparation is found in the sanitary reports Usually these reports are to the effect that the food is ample in quantity, varied in kind and well cooked As issued by the Subsistence Department or provided for by contract the articles of the ration have been of good marketable quality

Clothing—The clothing issued gave general satisfaction Marked improvement was noted at northern posts in the issue of knit wool drawers and of a less irritating quality of undershirt, but these are said to be not yet what they ought to be The wool alone required to make suitable underwear can not be purchased for the price of that now issued

Habits, Cleanliness, Athletic Exercises, etc—A general appreciation of the habits of the men may be had better by a consideration of what has been said in discussing the prevalence of venereal diseases and alcoholism, than by extensive citations from the reports from individual posts The Post Exchange is not suggested as a causative agent in the brawls and breaches of discipline occasionally reported as the result of alcoholic excesses Usually these are attributed to the facility with which whisky can be procured in the neighboring civil settlements As a rule, the men are clean, well set up, and soldierly in appearance The facilities for bathing have been improved greatly of late years, so that current sanitary reports have no reference to the absence of means for this purpose, except at the recently established post of Key West Barracks, where there is only salt water bathing, and this, although valuable as an athletic exercise and recreation is unsatisfactory for the maintenance of personal cleanliness

ASSOCIATION NEWS

Department and Secretary of Public Health.

To the Members of the American Medical Association

The American Medical Association at its session in Washington in 1891, adopted unanimously a resolution favoring a Department and Secretary of Public Health—said Secretary to be a member of the Cabinet of the President of the United States, and appointed a committee to urge upon Congress the passage of a law for the creation of such a Department and Secretary This committee has been continued, with slight changes, up to this time, and have prepared and presented to Congress a suitable bill, and by such methods as were open to them have endeavored to secure its passage This bill is now pending in both Houses of Congress

In the meantime the Association has pledged itself anew at every annual meeting since 1891, and notably in the annual meeting in Baltimore last May, to continue the work necessary to secure the desired legislation Many State medical associations and many local medical societies have passed resolutions approving of the end in view, and these resolutions have, presumably, been sent to the Senators and Representatives of the respective States

As the result of these measures, considerable interest has been excited in Congress in favor of the pending bill, but not enough to secure its passage

Under these indicated circumstances it becomes our duty to make still further effort, and we appeal to members of the Association everywhere, to give us all the help they can It certainly seems to us that if the hundred thousand doctors in the United States would unite as one man and earnestly request of Congress the passage of the bill to create a Department and Secretary of Public Health, that the enterprise could not fail of success Surely, whatever a hundred thousand doctors would ask for would be granted

We therefore recommend

1 That every State medical association and every local medical society shall, as promptly as may be, pass resolutions favoring the adoption of our bill, and that such resolutions shall be published in the medical journals and copies forwarded to the members of Congress

2 That every doctor in the United States shall address a private letter in advocacy of our bill to the senators and representatives in Congress from their respective States Every citizen has the right to appeal to his representatives, no matter whether he is acquainted with them personally or not Can any one believe that if all the doctors in any State were to unite in soliciting the senators and representatives of said State to pass this bill, that such solicitation would not bear good fruit?

3 The medical journals of the country, as a rule, have heretofore given us generous assistance, and we heartily urge upon them a continuance of their efforts in our behalf

(Signed) Jerome Cochran, Ch'm'n, Montgomery, Ala
C G Comegys, Cincinnati, Ohio
N S Davis, Chicago, Ill
J C Culbertson, Cincinnati, Ohio
Liston H Montgomery Chicago, Ill
Charles Denison, Denver Colo
U O B Wingate, Milwaukee, Wis
W B Atkinson, Philadelphia, Pa

(Medical periodicals favorable to the movement will please copy)

Veratrol, $C_8H_{10}O_2$, is described as a colorless oil, of an agreeable, aromatic odor, specific gravity, 1 086, boiling point, 205° C (401° F) It is made by acting upon veratric acid by baryta and heat It is soluble in alcohol, ether and oils From researches which have been carried out on synthetic veratrol, it appears that this drug possesses antiseptic properties in respect to certain pathogenic microbes—*Pharmaceutical Era*

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SATURDAY, NOVEMBER 2, 1895

THE DEFINITION OF EPILEPSY

The definition of a disease is generally supposed to give some adequate conception of its character, and any indefinite statement in this direction generally means that the ideas as to the disorder are vague, ill limited,or only partially understood Sometimes, however, a name carries a sufficiently clear though general idea, as in the term insanity while it would puzzle lawyers accustomed to every possible use of words to give a well rounded and complete definition With the term epilepsy, however, the case is not the same as with insanity , while it conveys to every one the general idea of convulsions or their equivalents, the definitions offered by high authorities clearly show that, as indicating a distinct disease, it is hardly employed with the accuracy and definiteness that should give the proper notion of a real morbid species One writer calls it "an affection of the nervous system characterized by attacks of unconsciousness," another speaks of it as "a disease in which there are convulsions of a certain type or sudden loss or impairment of consciousness," and still others mention various types according as they are "idiopathic," symptomatic, reflex or otherwise All or nearly all make loss of consciousness its chief characteristic in their definitions, but only to later make exceptions for the case of partial epilepsy in the subsequent descriptions In hardly any text-book is there a definition given that compactly and completely covers the ground as is done for most other nervous disorders, in all it is incomplete, requiring qualifications, and is often inaccurate

What is the propriety, for example, of calling epilepsy a functional neurosis, and distinguishing as a separate type all cases in which any gross organic disease can be recognized, when the connection of the convulsions with the latter is at best only assumed? A cerebral tumor localized in the brain, as a rule, no more demonstrates its exact relations with an epileptic attack than does an overloaded stomach or a diseased kidney , not, in fact, so much, since in these latter cases we can assume a toxic or disordered condition of the blood that may act directly upon the unstable nerve cells Nor is there any more propriety in separating Jacksonian from generalized epilepsy, as the lesions may be as obscure in one case as in the other The same may be said of infantile convulsions, which are only the reaction of an immature brain with undeveloped inhibitory powers to morbid irritations, or of the senile convulsive attacks due to the regressive changes of old age Epilepsy is simply and solely the symptom of cortical instability from whatever cause, and if it is ever exceptionally subcortical in its origin it must be due to the same irritability affecting the ganglionic representatives of the cortex in the basal portions of the brain The normal cortical cells, while a source, so to speak, of energy, are so balanced and controlled that these explosive morbid phenomena must be due to some actual physical disorder, whether this be from imperfections in development or from acquired defects through innutrition, intoxication, etc , as well as from gross disease With modern methods we are likely to learn more and more what these changes are, and the term idiopathic or simple epilepsy will be relegated to the general limbo for useless and forgotten names

The primary condition of instability once established, the epileptic attacks, varying according to the portion of the organ involved, from general convulsions to petit mal or the psychic equivalent, may be aroused often by a slight cause, whether it be reflex, toxic, emotional, or due to the irritation of gross disease, hence the distinction of these different forms of epilepsy is unjustifiable except as a mere matter of convenience in special cases The general definition of epilepsy that may be offered, therefore, is that it is a disorder consisting essentially in a condition of explosive cortical instability, and lack of inhibition, manifesting itself in general or local convulsive attacks, or in sudden temporary disturbances of consciousness and other psychic functions This includes not only the physical and intellectual manifestations, but also all emotional and volitional disturbances that may have to be classed under this head It does not unduly limit the disorder by making loss of consciousness its characteristic and it expresses the conception of what is coming to be universally recognized as the true pathology

With this conception of epilepsy in the mind, a clearer light is thrown upon the pathology and the treatment The futility of expecting to cure established epilepsy by simply cutting off sources of reflex irritation without attacking the primary condition is made self-evident, as is also that of attempting to find any single uniform lesion It is, as a clinical entity, a special form of disorder of cortical functioning, that may depend upon numerous and widely varying conditions

ACUTE PANCREATITIS AND DISSEMINATED FAT NECROSIS

One of the most interesting points in connection with instances of acute inflammatory affections of the pancreas is their frequent association with the condition which was first described by **Balser** (*Virch Archiv*, Bd 90, 1882) as disseminated fat necrosis The opinions that at present obtain, concerning the causes of these changes in the fat tissue are succinctly stated by **Thayer** in connection with the report of a successful operation for pancreatitis and parapancreatic abscess (*American Journal of Medical Sciences*, October, 1895) This case is really a very important one from a clinical standpoint, because it shows the possibility and importance of an early diagnosis and operation in acute pancreatitis It is the first case recorded in which the diagnosis has been followed by a successful operation Since the publication of the researches of **Fitz** on acute pancreatitis (Boston, 1889, also *Boston Med and Surg Journal*, 1889) in which he studied carefully his own cases as well as cases from the literature, a number of additional instances of acute pancreatitis have been described and some observations made that throw some light on the fat necrosis mentioned, as being frequently associated with acute inflammatory affections of the pancreas

Balser (loc cit) believed that these yellowish-white, opaque, small characteristic areas in fat tissue, that he termed disseminated fat necrosis were due to an overgrowth of fatty tissue, the central parts of the fat masses becoming necrotic from lack of nourishment, he believed the pancreatic changes to be secondary, because he found fat necrosis in bodies where no special symptoms had been present during life **Chiari** (*Prag med Woch*, 1893) regarded the process as degenerative, and could find no evidences of any fatty overgrowth **Fitz** (loc cit) thinks that there is a fat necrosis without any direct relation to severe lesions of the pancreas, and also that there is an inflammatory fat necrosis which is secondary to acute pancreatitis **Fitz** found in some of his cases, areas of round cell infiltration around the periphery of the necrotic foci and in some cases bacteria were also present **Langerhaus** (*Virch Archiv*, Bd 122, 1890) showed that the necrotic areas consist of a combination of lime salts with fatty acids and he advances the plausible suggestion that the process may take place as the result of the action of the fat splitting from the pancreas upon the fat tissue, the fatty acids afterward combining with lime Indeed, he states that he was able to produce similar changes in the subcutaneous fat of a dog by the injection of pancreatic extract **Rolleston** (*Trans Path Soc*, London, 1893) traced the cause of fat necrosis to disturbances of the trophic influences of the abdominal sympathetic system due to the extension of some morbid process from the pancreas

Balser (Vort Eleventh Congress f mat Med , 1892) made an additional communication concerning culture experiments, which were not finished, and the final outcome of which have not yet been published In 1891, **Welch** (*Medical News*, 1891) obtained the bacillus coli communis in pure culture from areas of fat necrosis, associated with acute pancreatitis, but he did not think that the necrosis resulted from a primary infection In a number of instances **Thayer** (loc cit) states that culture experiments by **Welch** have remained entirely without positive results

The real, exact cause, then, of these fat necroses is not entirely settled That the process may occur without pancreatic disease is beyond question, but in such cases the areas are usually limited to the interlobar fat tissue in the pancreas and such areas may be found, as every pathologist knows, in individuals in whom there have been no symptoms pointing to the process during life The areas can not be accounted for as due to direct infection, because cultures have proved sterile, both in instances without gross pancreatic disease, as well as in cases in which marked pancreatitis of undoubted infectious origin was present In view of these circumstances the observations of **Langerhaus** cited above become strikingly suggestive, areas, similar to those observed in connection with pancreatitis, may be produced by the direct action of pancreatic juice upon fatty tissue and consequently a primary lesion of the pancreas, of infectious or toxic origin, may allow the escape of the fat splitting ferment into the surrounding tissue which thus causes a secondary and sterile disseminated fat necrosis In connection with this, should be mentioned the experiments of **Hildebrand** (Trans German Society for Surgery, April, 1895, summarized in *Medicine*, September, 1895) who deligated the splenic part of the pancreas in cats and then tied all the pancreatic veins, in order to hinder the resorption of the collected secretion by way of the blood paths, and post-mortem he always found areas of fat necrosis in the pancreas itself, and in adjacent omentum and mesentery He obtained the same results by placing either pieces of pancreas, or the entire organ of one animal into the abdomen of another and, in one of these cases, extensive hemorrhage also occurred The areas of fat necroses were quite characteristic It will be seen that the results of **Hildebrand's** experiments appear to confirm the observations, as well as the suggestions of **Langerhaus** as regards the mode of formation of disseminated necrosis of fat

NEW YORK CITY HOSPITALS AND THEIR VISITING STAFFS

An important change in the manner of appointment of the visiting corps of surgeons and physicians at the county hospitals of New York County is predicted The hospitals which will be affected by the change are the Fordham, Harlem, Charity, and Gouverneur Hospitals, and all the institutions on Randall's, Blackwell's and Ward's Islands Bellevue Hospital is excluded

The Commissioners of Charities and Correction have decided to dismiss the medical boards in the hospitals under their control on November 1, and to appoint in the future only men recommended by the different medical colleges of the city The term medical board, as used in the city hospitals, means the staff of visiting and consulting physicians It is only in these posts that the changes will be made, the house staffs remaining as they have been No change at all will be made in Bellevue Hospital, as the medical board there has, since 1882, been composed only of men recommended by medical colleges It was the success of this practice at Bellevue that induced the Commissioners to make the change in other hospitals

CHICAGO MEDICAL INSPECTORS

The Civil Service Commission of the city of Chicago have postponed the examination which was advertised to take place November 7, until December 9

The Commissioners have decided that the examinations shall conform in general to those required for entrance into the Government Medical Services The following is the essential plan of examination, which will occupy about five days

1 The candidate will be required to pass a satisfactory physical examination, and in addition will certify that he labors under no physical disability

2 The candidate will then write a brief autobiography, and pass a short written examination in history, literature and physics He will then be examined in anatomy, physiology, chemistry (including bacteriology and toxicology), general medicine, general surgery, obstetrics, materia medica (including drug adulterations) and hygiene

3 The examination will conclude with a clinical examination at a hospital where exanthematous diseases are treated, and an accurate diagnosis of the cases will be required

From the foregoing it is evident that the Commission intend to raise the standard The salary of the Medical Inspector, it is understood, will for the present be fixed at $1,200 a year

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

This week we publish fifty-two pages of reading matter The vast pile of MS on hand in the office, admonished us once more that the space was too limited for the publication of the large amount of manuscript with which our friends have favored us After the conclusion of the current volume, it is in contemplation to make the enlargement a permanent one, as the great success of the publication seems now to fully warrant the additional expenditure We have not at any time thought it expedient to count the advertising pages, as making any part of the number of pages ! One of our esteemed contemporaries has the habit of counting its advertising pages in order to keep pace with the JOURNAL, but the practice is too transparent to make our readers at all envious, especially when they may easily look at the number of the last page of any even date and see for themselves that no weekly medical journal in America has given its readers more medical literature than their own

Not only has their JOURNAL given them a vast quantity of reading material, but at no time in the history of the ASSOCIATION has the quality of the articles been finer or of higher class, than it is to day The wisdom of the founders of the JOURNAL is more and more apparent every week

GOOD JOURNALS REPAY

DR ISRAEL B WASHBURN of Rensselaer, Indiana, writes to the *Medical Journal* of that State, his view of the comparative value of journals and formal treatises to the rural practitioner

"The country physician can use his money to much better advantage than in buying the larger treatises, by subscribing for as many good journals as he can read and, every three to five years, such works on special subjects as he needs There are few medical books that are not 'old and gray' in five years in these days of medical progress "

Sound advice We will add, subscribe only for journals of that high class that deserve to be preserved Bind the journal or journals that you find the most desirable for reference Unbound journals will seldom be consulted, and before long become a source of complaint to the housewife

CREDIT WHERE IT IS DUE

The obituary notice of SIR THOMAS LONGMORE which we published last week was extracted from the *British Medical Journal*, and by an inadvertence was not credited We are glad to say that, so far as we are aware, this is the first instance on record in which an article taken from another journal was not duly credited In our opinion there are few things more exasperating than to have articles copied from our JOURNAL without credit, or perhaps with that slipshod credit, "Ex" Some journals that are considered respectable, are hardened sinners in that regard

CORRESPONDENCE

A Domestic Test for Albuminous Urine

New York City, October, 1895

To the Editor —This is the title of a paper read by the writer at the last meeting of the New York Medical Association, held in New York City, Oct 15, 1895 Thinking that an abstract of the important part of that paper might be of some value to the readers of the Journal, it is sent to the Journal with the hope that you will deem it worthy of publication

The method of making this test is as follows pour into a test tube an inch of urine , with a dropper, drop carefully upon the surface of the urine half its quantity of alcohol If albumin be present in the urine, a white line will form between the two fluids, the same as in the cold nitric acid test

The other method is to put the alcohol in the test tube first, and drop as before, the urine into it If albumin be present in the urine, it will be made known by a white wave of coagulated albumin following the urine as it sinks to the bottom of the test tube The urine being heavier than the alcohol will gravitate to the bottom of the tube very quickly After a small quantity of urine has been added, the alcohol will become opaque with the coagulated albumin This test is so sensitive that the one hundredth of 1 per cent of albumin when present in the urine can be detected

The writer has used this method for about a year, both in private practice and hospital work It has been found to be the most convenient and most delicate of tests

Mucus will be coagulated if it be present, and may be mistaken for albumin Filtering before testing will eliminate mucus, if one is still in doubt, any of the control tests for mucus can be made No other ingredient of abnormal urine will give any trouble, more than when any other method for testing urine is employed Alcohol, if of the strength of 60 per cent , when clear, will answer every purpose, excepting one of delicacy

A glass tumbler may be used when it is impossible to obtain a test tube No heat, no acids required So convenient is the test that the physician can not be excused if he fails to discover the presence of albumin

The writer is convinced by a year's experience in the use of this method that if the profession will give it a trial none will be disappointed Any doubts which may remain in one's mind, can be removed by control tests Few of us rely upon one single test, by whatever method made

J G Truax M D

School Books on Physiology and Hygiene

Hartford, Conn , October, 1895

To the Editor —We inclose the following report, which at this time has considerable medical interest in many sections of the country During the past few years laws have been passed in Congress, and the Legislatures of forty-one different States, requiring instruction in the public school on physiology, hygiene and the effects of spirits and narcotics on the human body A large number of school books have been prepared to meet this requirement, nearly all of which have been compiled and edited by medical men, many of whom are eminent in the profession

Many of these works have been assailed in the daily press and denounced as containing errors, but the criticism so far has been limited to mere statements The authors of these works have invited from the medical profession the most critical examination and inquiry concerning the accuracy of the facts stated

This report is in accordance with this request, and the object (in which all medical men are interested) is to eliminate all possible errors and raise the character and accuracy of such works to the highest possible standard

Very truly yours, H A B

REPORT

We, the undersigned physicians, have been requested to examine and report on the various school physiologies which have been introduced to comply with the laws requiring temperance instruction in common schools

Our special attention has been directed to that part relating to the effects of alcohol, opium and other narcotics on the human body We have received and carefully examined eight different series of books called by the following names "The Pathfinder," "Appleton's," "Eclectic " "Union," Blaisdell," "Dulanie's," "The Health Series," and "Martin's High School Physiology "

As a result of this examination we are unanimous in opinion that the statements and teachings of these works concerning the effects of alcohol and other narcotics on the body are correct, and fully supported by the most authoritative studies of scientific investigators up to the present time

We are also of opinion that in both letter and spirit, these works are highly commendable, particularly in the admirable groupings of physiologic and hygienic facts, with excellent illustrations and clear concise statements

The practical character of these books commend them to us, and the interest and value of their teachings would seem to place them among the most important subjects that can be used in our public schools (Signed)

T D Crothers, M D

Superintendent Walnut Lodge Hospital, Hartford, Conn , editor of *Journal of Inebriety*

I N Quimby, M D ,

Vice-President American Medical Temperance Association, etc , Jersey City, N J

Lewis D Mason, M D ,

President of American Association for the Study and Cure of Inebriety, etc , Brooklyn, N Y

West Tennessee Medical and Surgical Association

Paris, Tenn , Oct 23, 1895

To the Editor —Please announce the meeting of West Tennessee Medical and Surgical Association at Covington, Tenn , Nov 21 and 22, 1895 Very truly yours,

I A McSwain, M D , Secretary

SOCIETY NEWS

"American Medicine "

In response to a toast at the annual dinner of the Chicago Gynecological Society, Oct 18, 1895, Dr John H Hollister, said

Let no man be over-anxious about his reputation If he intend the right and does his best ultimately that reputation will take care of itself and of him too This is true of nations individuals—true of nations Great as has been the progress of nations during the last 300 years, the development of America in that period has been the phenomenal fact Cradled without parental care, it came to its estate without the help of other nations , in fact, it grew by reason of their neglect A noble *manhood* was its only inheritance All else is of its own creation For nearly two centuries we were esteemed a semi-barbarous people by the crowned heads and the *elite* of Europe, and their prejudices have only been in any measure conquered by our sublime indifference

The struggle to make for ourselves a name and a place among the foremost, has been indeed severe, but the issue is no longer doubtful You who have met this prejudice on foreign shores know well how strong it yet remains, but you know full well that, as professional men, you have nothing left to fear, and that especially in medicine and surgery Americans have no apologies to make We are to be courteous *ever*, but deferential or craven, if ever we were, *nevermore*

Happily for us, American history holds no relationship with the mythical ages Our genesis was clearly written and the successive stages of our development are sharply defined From the landing of Columbus to this hour, ours has been a story of thrilling interest, and I am asked within these ten minutes to outline to you the agency of medical men in the accomplishment of present results Were every page of mine a volume, the half of their records in the making of American history could not be told Indulge me, therefore, in a little free-hand drawing while, from a single standpoint, I seek to sketch in briefest outline the deeds of those who tower in the distance like magnetic peaks, and others hardly less conspicuous, who coming a century later command a place in the immediate foreground

For the first hundred years and more, in our colonial history, our noted physicians were educated abroad—in Edinburgh and London and Paris Of medical schools we had none, and yet, despite this, and in the absence of foreign culture, there grew up in these western wilds a host of doctors whose successes in the treatment of diseases in those colonial days is still a matter commanding our respect But another day dawns It is the eve of the Revolution! Our first scene is laid in Boston, the time June, 1775 The whole country is aflame, for a crisis is at hand

If now there be one more conspicuous than his fellows (unless it be Samuel Adams) that man is a physician—a student of the eminent Dr Lloyd He is called from his profession, for Boston is in peril He is made president of its Committee of Public Safety, soon he is a major-general, but, seizing a musket, he is foremost in the fight and falls, as a private would fall, in the battle of Bunker Hill His name is Joseph Warren

In the annals of our medical history the name of his brother John is even more conspicuous He was senior surgeon in the improvising of Cambridge hospital in 1775, and cared for the wounded of Bunker Hill He was the founder of the medical department of Harvard College in 1783 His standing as a civilian may be inferred from the fact that he was the first to pronounce a Fourth of July oration in the famous patriotic city of Boston He was continuously the President of the Massachusetts Medical Society from 1804 to the date of his death in 1815 Following in his illustrious footsteps came another notable, his son, John Collins Warren He took his father's chair of surgery in Harvard in 1815, and held it in active service for sixty-two years In 1820 he united with others in the founding of the Massachusetts General Hospital In 1828 he founded the *Boston Medical and Surgical Journal* He introduced ether into surgical practice in 1846 He died in 1856, bequeathing his body to his school and his skeleton to his museum

It seems a cruel thing to leave so much of other early eminent physicians of Boston unsaid But the scene changes We come now to Philadelphia The time is also 1776 Benjamin Rush has studied in London, in Edinburgh, in Paris He stands in the forefront of his profession, and a most accomplished citizen as well Here too, in Philadelphia, the question of revolution is at fever heat A provisional council of the State is called He is there as a member In that body it is he who introduced a resolution "to consider the expediency of a Declaration of Independence" He was a member of the Continental Congress in June following He signed that Declaration as formulated by Jefferson, when men were to hang separately if they did not hang together He was both medical and surgeon general of the central division of the American armies in that most critical period In 1785 he founded the first dispensary in the United States Such were his invaluable services during that terrible invasion of yellow fever in 1793 that from most of the crowned heads of Europe, as well as from his own countrymen, he commanded most flattering testimonials Sparse as was our population in that early day, he gave instruction to over two thousand medical students, and despite its unpopularity was president of an abolition society beside

Nor must I, in the moments that remain, forego the name of Nathaniel Chapman Stung by the question of the *Edinburgh Review*, "In the four quarters of the globe who reads an American book, or goes to an American play, or looks at an American picture or statue? What does the world yet owe to American physicians and surgeons?" he determined that America should be heard from , and in 1820 he founded and edited the *Philadelphia Journal of Medical and Physical Sciences*, the first American medical journal, which seven years later became our well-known *American Journal of Medical Sciences* A monument to his memory is one of the fitting things yet to be, and if finally, it shall be an accomplished fact within his lifetime, Gihon will be happy

With the opening of the present century, especially after the war of 1812, with the return of prosperity to our people began the marvelous development of education, and prominent among educators were those devoted to the teaching of medicine and surgery From 1830 to the present date we founded over one hundred medical colleges We can not better measure the progress of medicine in America in the last half century than by comparing the colleges of 1850 with those of 1895

But, gentlemen, be it remembered that this wondrous evolution is not a matter of accident But for those earlier colleges, the best that could then be, our present grand universities would not now have being As I recount the planting of these medical colleges which were nearly all founded within my remembrance, the unselfish and unpaid labors of a host of men are recalled to mind—men who builded wisely in their day , men into whose labors you have entered—you hardly know at what cost Time would fail to tell you of these men even by name—of those just passed from our presence and of those who still linger among us, full of years and of honors—by whom a great preparatory work was so well achieved The Warrens, the Storrs and the Bigelows of Boston , the names of Valentine Mott, of Gurdon Buck, of Willard Parker, Alonzo Clark, the elder Flint, Peasley and Nathan Smith of New York , Chapman, Jackson, Dewees, Meigs, Dunglison, Horner and Gross of Philadelphia , Massey, Drake and Dawson of Cincinnati , Miller, Gibson and the Yandells of Louisville , Storrs and Jones, Bemiss and Richardson of New Orleans , Eve, Briggs and their confrères of Nashville , of Pope and McDowell and J B Johnson and Hodgen of St Louis , of Brainerd and Herrick Blaney and Freer, Johnson, Allen, Byford and Gunn, Ross, Jewell, Jackson and Parks, who have ceased from their work , and of Davis and Andrews and Isham and Bartlett of Chicago who still remain—*these all*—and their *associates* whom time does not permit me to name, have wrought with a success which you yourselves best know, for the development of American medical institutions and American medical literature

From this list, I purposely omit the names of McDowell, Symmes, Atlee and Battey, and a list of living eminent gynecologists, knowing that from yourselves at such a meeting as this, they will doubtless receive tributes more ample and more just—and I close with this single suggestion your predecessors were by no means satisfied with their then present labors, but they prophesied your coming They foresaw your greatly improved environments, your laboratories, your aseptic hospitals, your possibilities for achieving results which with them were impossible They have left those prophecies on record, and in memory of those who are dead, we, who still live, look earnestly, hopefully and confidently to *you* for their fulfillment

PUBLIC HEALTH

Camp Jenner, Eagle Pass, Texas—Passed Assistant Surgeon George M Magruder reports to the Surgeon-General of the Marine-Hospital Service under date of Oct 21, 1895, (Abstract of Sanitary Reports) that the camp was closed on that date and all refugees discharged

Contributions to the Study of Trichinosis—While the classical investigations of Leuckart, Zenke and Virchow have cleared up many points concerning the nature and pathogenesis of trichinosis, our knowledge is yet somewhat unsatisfactory as regards the route by means of which the trichinæ reach the muscles from the intestinal tract Leuckart believed from theoretic considerations that the embryos reach the muscles by means of independent locomotion along the connective tissue bands, but this conclusion was not based on experimental investigation In order to decide this question, Askanazy (*Archiv fur Pathologische Anatomie und Physiologie und fur Klinische Medicin* Bd CXLI, Heft 1, S 42) made use of animal experiments He examined rabbits dead from artificial trichinosis, as well as pieces of the tissues which were removed from the intestines of rabbits, for instance, under narcosis In this way he was able to study thoroughly the route selected by the trichina and he made the interesting observation that almost without exception only the female animals undertake emigration into the organism, a fact that corresponds well with the clinical conditions, namely that the feces contain male trichinæ in much greater numbers than females The process was found to be as follows the female intestinal trichinæ become closely adherent to the intestinal mucous membrane, often encircling the villi in a spiral manner and then they pass in an active boring manner into the wall until they reach the central chyle vessels which are penetrated The birth of embryo trichinæ now occurs, and only a small part of the brood is discharged in the lumen of the intestines, the majority of the young animals pass directly into the chyle vessels From the lymphatics they reach, first, the mesenteric lymph glands and, passing this filter, they are emptied through the thoracic duct into the general circulation It is, nevertheless, a very striking fact, that the young worms localize in the muscular tissue and, especially, that they seem to prefer certain definite and well-known muscle groups Askanazy attempts to explain this circumstance by resorting to chemotaxis as the most rational mode of explanation He succeeded in finding young trichinæ in small hemorrhagic lung foci where they had become arrested in the form of minute emboli The route by which the embryo trichinæ reach the muscles is consequently not the connective tissue strands but the lymph- and the blood-vascular system Askanazy also attempted to solve the problem of whether or not the survival of one infection resulted in any degree of immunity to succeeding infections, but his experiments as far as they went failed to show any immunity In one case reinfection occurred in a rabbit that had survived the first infection for half a year Several plates of colored illustrations make quite plain the observations outlined above

Medical Climatology of Mexico—The area of the vast territory of Mexico is 740,970 square miles, with a population of 11,632,924 souls The country may be divided into three regions 1, the coasts of the Gulf and the Pacific, up to 1,000 meters in height, a sandy porous soil or a sedimentary, wet, clayey soil covered with earth and very conducive to vegetation 2, between 1,000 and 2,000 meters the large and small alluvial valleys, cultivable, some conducive to the formation of marshes, others are chalky with stunted vegetation 3, from 2,000 to 3,000 meters, a small section of the rest of the country, with its mountains The Mexican coasts occupy a considerable extent Those of the Gulf measure 2,300 kilometers in length They are very low, sandy and marshy, those of the Pacific have an extent of 9,000 kilometers From the preceding topographic and orographic conditions it is seen that about two-thirds of Mexico lies in the temperate zone, the rest in the torrid The low lying regions are extremely insalubrious Palustral fevers are endemic, as is typhoid fever These conditions are explained by the luxuriant vegetation, the tropical temperature and the excessive humidity Among the endemic diseases of Mexico beside paludism (*cocoli rtli*), are helminthiasis, yellow fever, climatic fever, tetanus, pellagra, *vomito prieto* According to Dr Ruiz, paludism is to be found in the region of Vera Cruz which is covered with a tropical vegetation and has a damp warm atmosphere, as well as in the mountainous fertile region of Sonora The only localities exempt are those having a rocky soil, good water and a low mean temperature Yellow fever is observed on the coasts, especially from April to October The climatic fever presents itself under different aspects according to Guyon, as bilious, inflammatory, and typhic, "but in all its phases it has a special characteristic which makes it a nosologic entity, that is, the disease is not localized in the liver nor in any other viscus, and it is not induced by the palustral agent" Syphilis is found in all social classes, and is so diffused that its victims are to be found in hamlets as well as in cities "Mexico, the capital of the Republic," writes a distinguished hygienist, "is gaily constructed in a vast unhygienic area of the great Mexican valley" The population in 1890 was estimated at 451,246 The federal district which comprises the capital has an area of 463 square miles The extreme temperatures are, maximum (in the shade), 31 60 degrees C, minimum, 1 07 below zero, mean, 15 50 The general mortality rate is 40 per 1,000, and in nearly all localities of the federal district, it is even higher The prevalence of infectious disease in this district is very marked Of late the Superior Committee of Hygiene has advised the construction of a sewerage system, and the maintenance of pure drinking water, in order that, as Dr Samuel Gache remarks, the mean duration of life, which now is but twenty five years, may attain a higher figure, the resources of the country be increased and sanitary science have gained a new triumph[1]

Cholera in Honolulu—The sanitary column of the New York *Independent* for October 10 quotes from a recent Honolulu paper some suggestive statements regarding the spread of cholera at the place named The fountain head of the disease was among the Chinese on the SS *Belgic* where it was limited and stamped out, but extension to the native population was not prevented The exact method of this extension has not been satisfactorily explained, but the following has been offered as showing certain of the unusual environments of that community, as well as certain of the life endangering habits of the native population

"Mrs Emma M Nakauina, an intelligent and able half-white lady, and one of the highest authorities on such topics, has written an article for the *Pacific Commercial Advertiser* of September 5 that seems to afford a satisfactory clue She takes as a starting point the fact that the Chinamen who died at quarantine, died of undoubted cholera The practice has been to bury quarantined persons, without coffins, on a sandspit very near to the home of certain women who make a business of gathering and selling in the fish market crabs, limu and mud fishes Among these crabs are two varieties that are described and named with a word that means 'corpse eating,' from their well-known fondness for animal matter, especially decaying human flesh, and these crabs have been met at night half a mile inland from the sea, seeking decomposing animal matter, and the natives bury their dead far inland to preserve them from the ghoulish raids of these creatures At the very beginning of the epidemic a festivity known as a *luau* feast was held in Iwilei—a portion of Honolulu—and Mrs Nakauina, from her knowledge of the habits of her race, makes no doubt that the crabs and limu caught in the immediate vicinity of the quarantine graveyard formed part of the feast, and she says, very positively 'Now, those crabs at the previous high tide, perhaps an hour before, had themselves been feasting on the bodies of those cholera patients, buried on the sandspit immediately to the seaward of the residence of these fisherwomen Here was direct, undiluted contagion' And it should be understood that the crabs, after an interesting method of preparation, are eaten uncooked The lady elaborately describes the method of the natives in using the crabs, and leaves little doubt on the mind as to the complete deadly career of the microbes Moreover, she shows that the conduct of the Kanakas, owing to ignorance, is exactly parallel to that of the southern negroes, who could not be compelled to destroy yellow fever infected garments by burning, but would hide them, and the natives of Hawaii wash blankets and bedding in the running streams, unwilling to burn them, and skeptical of the danger That the dark places of the earth are still 'habitations of cruelty,' is shown afresh by a horribly revolting superstition still holding sway over the minds of many natives If a person has an enemy, he hires a *kahuna*, or witch, to 'pray the enemy to death'—a process called ana anaing said enemy—no mention being made of any surreptitious aid the witch may have given to his prayers If the ana-ana is effectual, the relatives of the dead person have their innings by taking some of the hair and nails, or, preferably, some of the excreta of the dead person, wrapping it in a clean new bit of cocoanut fiber cloth, and placing it under a stone in some water source, in the firm belief that the essence of the dead will spread out in the water, and if drunk by the person who was guilty of ana anaing the departed, would cause his death in a short time With our knowledge of the diffusion of bacteria, we shudder at a proceeding matched only by a tie on the railroad or a dynamite bomb The ignorant islanders did not lay the early deaths to the cholera-infected crabs, but they had all partaken of a pig that had been bought with the proceeds of a horse that had been stolen, the owner of the horse had employed one of the most powerful (unscrupulous?) of the witches to ana-ana the theft of the horse, hence the deaths, in their eyes It is no wonder that the intelligent lady who fathomed the cause of infection urges the Health Board to guard springs and water courses"

Health Reports—The following health reports have been received by the Supervising Surgeon-General, Marine-Hospital Service

SMALLPOX—UNITED STATES

New Orleans October 12 to 19, 5 cases, 1 death
New York City October 19 to 26, 1 death
Detroit, Mich October 12 to 19, smallpox reported
Rochester, Mich October 18, 1 case
Arizona, Nogales October 24, 2 cases
Arkansas, Clay County September 18 to October 22, 3 cases, 7 deaths

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[1] *Journal d'Hygiene*, 1895, No 984

SMALLPOX—FOREIGN

Bologna October 5 to 12 1 case
Dublin October 5 to 12 24 cases, 1 death
Gibraltar September 30 to October 6, 1 case
Glasgow September 29 to October 12, 2 cases
London, Eng October 5 to 12, 158 cases, 2 deaths
Madrid October 1 to 8, 8 deaths
Montevideo September 14 to 21, 5 cases
Naples October 5 to 12, 7 cases, 7 deaths
Paris October 5 to 12, 1 death
Prague September 29 to October 12, 2 cases
St Petersburg September 29 to October 5, 8 cases, 8 deaths
Tuypan October 5 to 12, 5 deaths
Warsaw September 29 to October 12, 2 deaths
Singapore August 1 to 31, 1 death
Constantinople July 1 to 31, 41 deaths

CHOLERA

Bombay September 17 to 24 1 death
Roubaix September 1 to 30, 38 deaths

YELLOW FEVER

San Juan, Porto Rico September 21 to 28, 6 cases, 5 deaths September 28 to October 5, 5 cases, 1 death

SELECTIONS

Shortening of the Femur—Mr Thomas Bryant has contributed to the *Press and Circular* a recital of his experience in regard to shortening of the lower limb, especially in those cases where the femur is liable to be inculpated He says that in those cases of shortening of the lower extremity it is essential to closely investigate the condition of the neck of the femur If this plan be followed, as a regular rule, the explanation of many cases of shortening otherwise obscure and baffling, will be rendered plain The causes of shortening of the femur may be grouped into five varieties, namely

1 Impacted fracture of the neck of the femur

2 Arrest of growth of the neck, following disease the result of injury

3 Disease of the hip joint

4 Arrest of growth of the lower end of the femur from disease of the epiphysis

5 Arrest of growth of the lower end of the femur following disorganization of the knee joint

When the shortening of a leg amounts to a quarter of an inch and no more, the defect may be disregarded, this is not unfrequently present naturally or congenitally Again, half an inch shortening is by no means infrequent after fracture of the thigh In measuring for any shortening that may be present in a lower limb it is a good plan first to compare the length of both limbs from the top of the great trochanter of the external malleolus If the measurement be the same on both sides, then it is obvious that the shortening must be confined to the neck of the shorter femur, excepting always those possible exceptional cases, just above referred to, wherein there is the normal or non accidental disparity

Pyemia due to a Capsule Bacillus—Chiari (*Prager med Wochenschrift*, 1895, No 24–27) described a case of pyemia following an ascending suppurative nephritis in which the bacteriologic examination demonstrated the presence of a capsule bacillus as the etiologic agent The post-mortem examination showed in addition to certain old changes, suppurative nephritis, suppurative prostatitis and cysto pyelitis, acute endocarditis, and finally an otitis media and a meningitis In all these foci was found a bacillus which showed a distinct capsule This bacillus was pathogenic for all ordinary animals used for experimental purposes Rabbits were most resistant Subcutaneous injection produced suppuration, intravenous injection caused a rapidly fatal septicemia, injection into the kidneys caused suppurative nephritis with consecutive septicemia In guinea pigs the intra-abdominal injection caused diffuse peritonitis and death in twelve hours Mice died very soon after subcutaneous injection at the root of the tail This bacillus did not lose any of its virulence after repeated cultivations It was not stained with Gram's method, it grew rapidly in high glycerin-sugar-agar, producing abundant gas It was distinguished from the Friedlander's pneumonia bacillus by certain cultural peculiarities, by being markedly pathogenic for rabbits and by being fatal to mice after subcutaneous injection Sections from the diseased organs showed that it had a close relation to the morbid processes and that its presence could not be referred to post-mortem invasion In all likelihood, the point of entrance was the urethra, hence the cystitis, the prostatitis and the ascending nephritis From the suppurating foci in the kidneys, the bacilli invaded the blood and caused the endocarditis, the meningitis and the otitis

Pathologic Relations of the Liver and Intestines—Professor Hanot of Paris, in concluding his brilliant address on "The Intestines and Liver in Pathology," before the Congress of Internal Medicine recently held in Bordeaux, summed up as follows[1] Physiologically there exist intimate nervous and circulatory relations between the liver and intestines The liver is one of the essential parts of general nutrition, it feeds all organic activity and protects it against poisons, and, lastly, it creates the bile Thus the liver maintains the nutritive equilibrium of the intestine, it continually neutralizes the poisons which arrive at or are formed in the latter viscus, it also aids in the special work of digestion The physiologic services rendered by the intestine to the liver are not so marked It brings to the liver a part of the elements of its nutrition and of its special energy, it assists the liver in its digestive function and perhaps assists also in its anti-toxic action The intestine appears to be a vestibule for all the toxic and infectious agents going to the liver in combinations and in multiple proportions—alimentary poisons like alcohol, digestive poisons like acetic, lactic and butyric acids, microbes and their toxins Modern science has corrected an error of the old pathology—the portal vein is not the sole carrier of poisons, it brings only external poisons so to speak, the hepatic artery in its turn brings those from the interior of the organism Again, if the portal vein brings infection from the intestine to the liver, the hepatic artery distributes it generally The noxious influence of the intestine on the liver is only exercised when the latter organ permits it, it is entirely subordinated to the hepatic condition It is the state of the relations between the liver and the intestine from a pathologic point of view which is the beginning of the doctrine of intestinal antisepsis We can now readily conceive that intestinal antisepsis ought not only to comprehend the action exerted directly on the intestine, but also the indirect action exerted on the liver While we are neutralizing the poisons in the intestine we must maintain or assist the antitoxic power of the liver which helps to annihilate them In destroying part of the poisons in the intestine we preserve the liver so to speak Again, by maintaining the antitoxic properties of the liver we defend it against the products of intoxication reaching it from the depths of the tissues and which are added to the poisons of intestinal origin In short antiseptic measures are efficacious only when hepato-intestinal antisepsis is maintained

The Physician in Plato's Republic—The *Lancet* has the following scholarly note that reveals the mind of the great Greek philosopher concerning the status of medicine in his own time To those of the profession who are interested in historic reflections, it will be pleasing to note that Plato gave precedence to the physician, empirical though he was in that age, over the contemporary theologian or "hierophant" In Plato's scheme the classes that embrace the artist, the ruler and the merchant were those who stood superior to the physician The physician stood fourth in a series of eight classes The *Lancet* says "In a curious passage in one of the most famous of his dialogues—the Phædrus—Plato sketches his view of the doctrine of the transmigration of souls The soul which has seen most of truth in its former state comes to the birth as a philosopher or artist, or musician, or lover, that which has seen truth in the second degree shall be a righteous king, or warrior or lord, the soul which is of the third class shall be a politician, or economist, or trader, the fourth shall be a lover of gymnastic toils or a physician, the fifth a prophet or hierophant, to the sixth a poet or imitator will be appropriate, to the seventh the life of an artisan or husbandman, to the eighth that of a sophist or demagogue, to the ninth a tyrant 'All these,' says the philosopher, 'are states of probation, in which he who lives righteously improves, and he who lives unrighteously deteriorates his lot' The order of precedence in the above list is very curious and highly characteristic of the Hellenic mind The philosopher at the top of the scale and the tyrant at the bottom show that even Plato was not free from the prejudices of his nation and his caste The place he assigns to the physician—viz, fourth in the scale—is not a very elevated one, and it is somewhat singular to find him bracketed with the lover of gymnastic toils It is something, however, to find that the 'prophet or hierophant'—the ancient representative of an important profession—is placed even lower—viz, fifth Plato's comparatively low esteem for the profession of medicine is not difficult to understand, *since at a time when anatomy consisted of a few crude facts and physiology did not exist* it was impossible that medicine could command the reverence of any profound and penetrating intellect We find Plato constantly in his dialogues alluding to medicine as if it consisted of little else but giving a purge or an emetic No doubt Hippocrates was a man of profound genius and of immense knowledge, considering his time, but it is very unlikely that the average practitioner rose above the level of the mere drug giving empiric Lovers of Plato, who, we trust, are not few in the profession, may read their favorite author without feeling aggrieved that in his appreciation of medicine he did not rise above the level of his time It is probable that the average practitioner of those days combined much presumption and not a little chicanery with a plentiful lack of real medical knowledge, and it can hardly be a matter of wonder that the philosopher looked askance upon such pretenders"

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[1] Le Bulletin Medical Aug 18 1895

Inguinal Hernia of the Gravid Uterus—Rosanhaff in the *Semaine Medicale*, Oct 2, 1895, from *Archives für Klinische Chirurgie*, vol XLIX, Bd 4, reports a remarkable case of inguinal hernia of the gravid uterus with premature delivery, and finally an operation for the radical cure of the hernia with recovery of the patient The patient was a woman 45 years of age, who entered the surgical clinic at Moscow for left inguinal hernia, which she had noticed for about five years In February, 1893, the hernia had become irreducible, and the preceding June was taken with rapid growth coincident with cessation of the menses The patient had had twelve children and had been delivered of the last three, notwithstanding the existence of the hernia On her arrival in the clinic in January, 1894, she presented in the left groin a tumor which descended within 6 centimeters of the knee and had the appearance of a very large inguinal hernia Its form was ovoid, and it measured 45 centimeters from above downward, while its diameter attained 80 centimeters at the largest place The integuments which covered it were very thin and deeply pigmented The tumor was dull but movable and presented a compact mass in its interior It was dull on percussion and a *bruit* could not be heard on auscultation The patient had never perceived any fetal movement The neck of the uterus was very much raised and to the touch was in continuity to the hernial tumor On Jan 25, 1894, the patient lost a great quantity of amniotic liquid and the tumor considerably diminished He was able to recognize the position of the fetus, and its head was found in the dependent portion of the sac corresponding to the neck The neck was turned to the left side Two hours after the flow of waters there began contractions of the uterus which were minutely observed, and they consisted of peristaltic movements from the fundus of the uterus and were very rapidly propagated from above downward, but the uterus in its entirety contracted energetically, and its transverse diameter was diminished at the same time that its antero posterior diameter was elongated The contractions of the uterus were not accompanied by any painful sensation, they terminated alone and without participation of the abdominal muscles, and a fetus of the weight of 2,200 grams was expelled The next day the womb and a portion
of its adnexa were easily reduced into the abdominal cavity
The hernial ring was so large as to easily admit the hand
the left ovary and a part of the tube of the left side resisted
taxis The symptoms following the accouchment were ab
solutely normal, but unfortunately knuckles of intestine at
tached themselves to the hernial sac and escaped into th
place left free by the uterus On April 7 it was decided t
practice an operation for the radical cure of the hernia Af
ter resection of the ovary and the left tube, which were irre
ducible, and the reduction of the intestinal folds, he resecte
the vast sac and closed its neck by sutures He then mad
an occlusion of the ring and terminated the operation b
suturing the wound after having excised the integument
that were in excess The patient left the hospital cured
about a month and up to the date of the report had not ha
any return This case, says the reporter in the *Semaine Med*
icale, is unique of its kind, for on one part the accouchmen
is operated by the uterine muscles alone, and for anothe
part the uterus was able to be reduced into the abdomin
cavity, while all the other cases of uterine hernia heretofor
reported have been irreducible The author believes th
the hernia and the left tube, as well as the intestinal fol
originally formed the contents of the sac in which the uter
penetrated more slowly

Electrotherapy as a Means of Diagnosis in Gynecology—*Dr*
Apostoli, (British Medical Association, 1895) after a lo
and thorough trial of his method, has come to the followi
general conclusions

1 The faradic current of tension (generated by the c
of long and fine wire) applied to the uterine cavity, accor
ing to the rules established by Dr Apostoli in 1883, reliev
for a longer or shorter time, all ovarian pain of nervous
hysterical origin, but remains powerless or nearly so
cases of ovarian pain caused by inflammatory lesion of t
peri-uterine tissue or of the appendages

2 The same faradic current is therefore useful in diag
sis, inasmuch as it helps us to distinguish the nature of
called ovarian pain, and to determine rapidly the different
diagnosis between hysterical and inflammatory ovarian pa
Where the two kinds of pain exist in the same patient,
are helped to understand their nature by the fact that
one is relieved and the other is not

3 If, then, the curative effect of the faradic current cle
up or rectifies a doubtful diagnosis, it protects us at
same time from undertaking a useless operation On
other hand, if the same faradic current proves ineffect
the lesion being inflammatory, we are led to resort to a s
plementary galvanic treatment or to a surgical operat
sooner or later

4 The constant galvanic current, applied to the uter
cavity in doses gradually increasing from 50 to 120 milli
pères, according to the rules published by Dr Apostoli
1884, and bearing in mind the individual susceptibility
tolerance, will be almost always supported without m
pain during the séance, and without febrile reaction af
ward, if the parts adjacent to the uterus are free f
inflammation

Simple cystic, peri uterine tumors, which are nei
inflamed nor suppurating (such as ovarian cysts and hy
salpinx), may also show perfect tolerance of the galv
current

The galvanic current is also sometimes perfectly
ported by cases in which the uterus is surrounded by
inflammatory products or exudations no longer pathog
5 There are three classes of cases which should be
sidered as exceptions to the preceding rule, for they
the galvanic current more or less badly, though they do
necessarily produce much febrile reaction after the séa

They are (*a*), certain forms of hysteria, (*b*), fibro c
tumors of the uterus, (*c*), enteritis with false membr
It is generally easy to diagnose these cases of intolera

6 All acute peri-uterine inflammation (of the pelvic
ular tissues, of the peritoneum and especially of the ap
dages) will cause the galvanic current to be badly b
when it passes 40 or 50 milliampères, and will cause int
able pain and febrile reaction when carried beyond
intensity

7 The intolerance for the galvanic current is gene
proportionate to the extent and gravity of the lesion
ferred to, and increases with the intensity of the cu
employed—especially when it passes 40 or 50 milliamp

8 All inflammation of the appendages which is
ble (symptomatically at least) without radical opera
will bear the galvanic current better and better, and

will be a corresponding improvement of the prominent symptoms such as pain and hemorrhages The intolerance noted at the beginning progressively disappears

9 All grave inflammatory lesions of the appendages, and notably all suppurative processes which are incurable (even symptomatically) by conservative means, show the same intolerance from the beginning to the end of the treatment which was noticed at first, and which is apt to increase instead of diminish if the treatment is continued

10 Thus the simple study of the tolerance or intolerance of the intra-uterine galvanic treatment, and especially of the post operative pain and fever occurring on the evening of, or the day following the treatment, enables us to make the diagnosis It also in four or five séances, given twice weekly informs us of the condition of the appendages of their possible inflammation and its degree, and in this way it lessens the number of laparotomies and exploratory incisions

11 The same study of the so called galvanic reactions also informs us rapidly (in five to ten séances) of the curability of these inflammatory lesions which the electric current has demonstrated, and in consequence of this it tells us in one case to abstain from operation, while in another it shows an *operation to be urgent*

12 *En resumé* gynecological electro therapeutics, carefully, methodically and patiently applied, instead of being opposed to the marvelous progress of surgery, comes to its aid

Independently, in fact, of the great therapeutic service which it renders every day, electricity serves as a touchstone, it assists us in diagnosis and thus directly serves the interests of surgery, in one case showing an operation to be useless and dangerous, in another that its necessity is urgent

Thus, many of laparotomies, so-called exploratory incisions and mutilations practiced without due deliberation for the relief of rebellious ovarian pain, or for lesions of the appendages of uncertain nature, should be from this time forth, delayed or formally proscribed until all the resources of faradic sedation on the one hand and of the intra-uterine galvanic effect on the other have been tried Experience has abundantly proved these currents to be innocuous, if given with necessary aseptic precautions

NECROLOGY

Frederick M Warner, M D, of New York city, died October 8 He was born in 1857, was graduated from Lehigh University in 1877, and subsequently from the College of Physicians and Surgeons He was house surgeon in the Nursery and Children's Hospital for a year, then went to Europe and took post-graduate courses at Vienna and Heidelberg Since 1881 he had practiced in New York He was a member of the New York Academy of Medicine, and of the boards of several hospitals A widow and two sons survive him

Thomas Keith, M D, LL D F R S, of London, Eng October 9 aged 89 ——J H McLean M D, of Cass City, Mich, October 21 ——Albert Champau, M D, of Detroit, Mich, October 19 ——G M Harris, M D, of Lorain, Ohio, October 24.——S E Clement, M D., of Paris, Tex, October 18, aged 75 ——Judd Packard, M D, of Racine Wis, October 22, aged 25 ——O O Searcey, M D of Temple, Tex, October 19 ——H B Gibson, M D, of Columbia, Mo, October 18, aged 45 ——Abbie J Seymour M D, of Buffalo, N Y, October 17 aged 42 —— T F Owen, M D, of Springfield, Ohio, October 17, aged 64 —— T B Cox, M D, of Frankfort, Ind, October 16, aged 78 ——R L Koepsel, M D of Kansas City Mo, October 16, aged 34 C W Stoddard M D, Ramsey, Ill, October 11

MISCELLANY

An Old Favorite —[For bronchial spasmodic coughs]

℞ Tr benzoin comp	20
Tr opii camph	20
Tr cannabis indicæ	5

M et sig 10 to 20 drops on loaf sugar, as occasion may require

A little Australian boy had been to a Museum of Natural History When he came home he was asked where he had been, and said 'Oh, we've had a lovely time We've been to a dead circus"—*The Outlook*

The Language of a Convalescent —Chief Justice Waite and Judge Hall, of North Carolina, were members of an excursion party on one of the Chesapeake Bay boats When the steamer had fairly got out into the Atlantic, the sea was very rough, and Judge Hall was taken violently with seasickness As he was moaning aloud in his agony, the Chief Justice, laying a soothing hand on his shoulder, said "My dear Hall, can I do anything for you? Just suggest what you wish" 'I wish," said the sea sick Judge, "your Honor would overrule this motion"—*Washington Globe*

Death in Faith-Healer's Family —A certain religionist of New York city, for whom has been claimed powers of healing only a little short of raising the dead to life, has suffered the loss by death from pulmonary tuberculosis of one of his children No one will care to gloat over this faith-healer's domestic tragedy but if some of his blinded adherents could by the sad event have their eyes opened to the limitations of faith cure, no little causeless suffering might be prevented

A Thirty-Ounce Emergency Ration —A dispatch from Washington states that some progress has been made regarding the proposed new emergency ration of the Army The annual report of the Commissary-General of the United States Army says that under direction of the Secretary of War, a board was appointed by the Commanding General of each department, consisting of one officer of the subsistence department, one officer of the medical department, and three officers of the line of the Army, to report on the components of the emergency rations to be carried on the person of the soldier on emergent occasions, where transportation is limited or is not available, and it is believed that it will be possible to provide a ration weighing not more than thirty ounces that will contain sufficient nutriment for the soldier for one day

Ludhiana School of Medicine for Women.—It has for some time been in the minds of missionaries and others, to establish a North India School of Medicine for Christian women, at Ludhiana, in the Punjaub In November, 1894, a beginning was made, and for the last two terms the students have numbered thirteen Five of these are being trained as nurses, two as compounders, and six have entered for the full course of medical study With the exception of two English girls, all are natives or Eurasians The object of the school is to give native and Eurasian girls the opportunity of pursuing a complete course of medical study under the instruction of fully qualified lady doctors, and at the same time to keep them under Christian influence, so that when their curriculum is completed, they may be fitted to minister to the spiritual as well as the physical needs of their suffering sisters, and thus be true medical missionaries Funds are greatly needed for the completion of the passage money, and also for the support of the school Scholarships of £20 per year are also much desired, as the students are mostly unable to pay their own fees

The Samuel D Gross Prize —The second quinquennial prize of $1 000 under the will of the late Samuel D Gross, M D, will be awarded Jan 1, 1900, by the Philadelphia Academy of Surgery The conditions annexed by the testator are that the prize, "shall be awarded every five years to the writer of the best original essay, not exceeding one hundred and fifty printed pages, octavo, in length, illustrative of some subject in surgical pathology or surgical practice, founded upon original investigations, the candidates for the prize to be American citizens" It is expressly stipulated that the successful competitor who receives the prize shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D Gross Library of the Philadelphia Academy of Surgery The essays, which must be written by a single author in the English language should be sent to Dr J Ewing Mears, 1429 Walnut Street, Philadelphia, before Jan 1, 1900 Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer No envelope will be opened except that which accompanies the successful essay The committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year The committee reserves the right to make no award, if the essays submitted are not considered worthy of the prize

A Popular Sanitary Tax —Mr H A Andrews has contributed to the October number of *Annals of Hygiene* an account of the Atlanta system of taxation for sanitary purposes The chief sanitary operations for keeping that city sweet and clean are provided for by a house-tax of $3 per year per house, which is known as the sanitary tax With the fund thus derived, and also some other sanitary funds, the source of which is not here stated, the city collects all swill, garbage, night soil, sweepings and other filth, and disposes of them in a salutary manner This house-tax is popular with the average citizen, because he can not otherwise have his premises cared for in the same manner for several times that sum The city is considering reducing the tax to $2 The garbage from the business portion of the city is collected every day, and generally twice a day, especially in the wholesale and market districts In the residence portion of the city, where it is thickly settled, collections are made every day, in other portions, three and four times each week The night soil is taken up from the water closets every week, and none of it is allowed to remain longer It is emptied from the water-tight vessels directly into sealed barrels and driven immediately to the place of final disposition—the crematory The combustible waste at all times is allowed to be mixed with the house and store garbage and operates as a great absorbent, and finally as fuel to burn the more offensive filth This plan is popular with the citizens, as it involves no sorting, nor separation of garbage and trash, or combustible waste The combustible waste and trash are as valuable to the city as cars of coal or other fuel

A Vesical Sequela of Ovariotomy —The *Lancet* for August 24, contains a report of an unusual sequel of an operation for the relief of cystic tumor of the ovary The reporter is Dr Walter Falla, of St Heliers, Jersey, who performed the operation in May, 1894, upon a woman aged 52 years After operation a good recovery was recorded About the end of the eighth month the woman began to complain of pain on micturition, and at the twelfth month there was noticed by her a small amount of blood in the urine In June, 1895, she again consulted her surgeon, and gave all the objective symptoms of urinary calculus, but refused to be examined at that time The pain, however, increased, and two weeks later the sound was passed, and a stone of large size was readily recognized About a week later the calculus was removed by lithotrity The removal of the lithotrite was attended with difficulty and delay, a fact that was subsequently explained when there was found entangled in the blades of the instrument a thick silk ligature covered with a certain amount of phosphatic deposit The ligature had served as the nucleus for the large vesical calculus, and was without doubt the identical ligature that had been used by the surgeon for tying the pedicle during the ovariotomy The unusual features are the entry of the ligature through the vesical walls, with practically no disturbance of the general health of the patient for nine months, and that a foreign body of so considerable size as this substantial ligature should dispose of itself in this situation, when it is beyond dispute in the mind of the operator that the bladder was in nowise injured or endangered in the performance of the operation

Tendon Grafting, a new Operation for Deformities following Infantile Paralysis —At the meeting of the New York State Medical Association, Oct 15, 1895 (*Medical Record*, October 26), Dr Samuel E Milliken, Surgeon-in-Chief of the New York Infirmary for Crippled Children, and Surgeon to the Infants' and Children's Hospitals, presented a boy 11 years of age upon whom twenty months before he had successfully grafted part of the extensor tendon of the great toe into the tendon of the tibialis anticus muscle, the latter having been paralyzed since the child was eighteen months old The case which was presented showed the advantages of only taking part of the tendon of a healthy muscle, which was made to carry on the function of its paralyzed associate, without in any way interfering with its own work The brace which had been worn since 2 years of age was left off, the patient walked without a limp, the talipes valgus was entirely corrected and the boy had become quite an expert on roller skates Dr Milliken predicts a great field for tendon grafting in these otherwise hopeless cases of infantile paralysis, who heretofore have been condemned to the wearing of braces all their lives

How to Read Your Journal —Not every physician knows how to read a medical journal to the best advantage With its numerous readers, with diversified tastes to which to cater, and the vast field from which to cull its topics, it would indeed be strange if all parts of the journal were alike interesting to all The technical discussion of an intricate operation is not of great moment to the busy practitioner, the treatment of pertussis does not interest the oculist, nor the description of the varieties of cataract the gynecologist, and the medical man who attempts to read a journal through, irrespective of its particular value to himself, wastes his time and fails to get good ofttimes from any portion of it. Memory is treacherous in most of us, the thing we want most to remember is often soonest forgotten, and we strive in vain to recall that particular fact which so impressed us as we read the paper Now this may all be obviated by the employment of a system in reading Do not try to remember all that you see, but glancing through the pages note the articles that concern you and with a careful reading note in a book kept for this purpose where the information is contained and where the article may be found, should you in the future desire aid upon this point Such a book, an Index Rerum carefully indexed, is a library in itself and always ready of access, is an invaluable aid in suggestive therapeutics, in difficult and obscure cases, and in all literary work The work of the *Index Medicus*, whose loss we mourn, can be done for each individual with the expenditure of so little effort and time that it is strange the method is not more universally adopted —*Atlantic Medical Weekly*

Illinois State Board of Health —In making provision for the ordinary and contingent expenses of the State government, the Illinois Legislature appropriated for the State Board of Health for salary of secretary, $3,000, for necessary office expenses, including expenses incurred in attending meetings of the board, and in making sanitary inspections, $2,000, for chief clerk, $1,800, for clerk, $1,150, for stenographer, $720, and for incidental expenses, $330—all per annum It also appropriated the sum of $10,000, as a contingent fund, to be used only with the consent and concurrence of the Governor, upon the recommendation and advice of the board, in case of the outbreak or threatened outbreak of any epidemic or malignant disease, such as Asiatic cholera, smallpox, yellow fever, or to defray the expenses of preventing the introduction of such diseases or their spread from place to place within the State, and in suppressing outbreaks which may occur, and in investigating their methods of prevention, also special investigations when required by the necessities of the State, any necessary expenditures from this sum to be paid on the order of the president of the board, attested by the secretary and approved by the Governor

A Costly Hospital for Contagious Diseases —One of the new hospitals for the infectious sick of London is known as the Fountain Hospital It is concerning this institution that the *Sanitary Record* regrets to note that a dispute has arisen between the great Local Government Board and the powerful Metropolitan Asylums Board "Strictures have been passed," says the *Record*, "by the former against the latter, generally as to the policy to be adopted in dealing with any outbreak of infectious disease which may occur, such as necessitating increased accommodation for the reception of patients being provided with all possible speed, also, specifically, in relation to the expenditure incurred in the erection and equipment of the temporary Fountain Hospital The Local Government Board complains that, whereas the temporary hospital at Tottenham, which was intended to receive 456 patients, cost £119 per bed, the temporary Fountain Hospital to accommodate 406 persons, has resulted in an expenditure of £288 per bed, that the cost of the latter has involved a charge upon the rates of £128 000, that the expenditure has been excessive, that the items of expense should have been scrutinized with great care and vigilance by the managers, and that the architect should not have been given full power in the erection of the Fountain Hospital A lengthy letter to this effect was recently forwarded by the Local Government Board to the managers of the Metropolitan Asylums District, and at a meeting of the latter, on October 3, an even more copious reply to those comments, forwarded on the 2d inst, to the Local Government Board, was read and passed The managers of the Metropolitan Asylums District, in reply to the Local Government Board, dissent entirely from the latter's opinion that they were not justified in leaving the matter, which involved such a large expenditure of public funds, in the hands of one man, and they state that any interference on their part with the discretion of the architect would not only have been imprudent, but that it would have led to confusion and delays, and would probably have added to rather than diminished the cost As to the expenditure, the managers point out that, so far as the extra cost is due to the expedition with which the hospital was constructed, they are quite unable to regard themselves as in any sense responsible, the hospital had to be constructed within a certain period, and this necessitated overtime to the extent of finally all night work, and even on Sundays It is further submitted that, having regard to all the circumstances of the case, and allowing for the additional cost paid for speedy construction, good value has been obtained in the Fountain Hospital, which 'is well planned and arranged and well built, and will last for many years" In conclusion, the managers state that they regard the strictures as undeserved and uncalled for, and state that the course pursued was the only one possible under the circumstances

Therapeutics Without Drugs —In a recent address delivered by invitation before the Lehigh Valley Medical Association, Dr Solomon Solis Cohen, of Philadelphia, directed attention to the fact that drug giving is not essential in our therapeutics in very many cases, and, as a rule, should be made to play a subsidiary part Acknowledging their usefulness in proper hands and under proper circumstances, the too great frequency with which drugs are resorted to encourages patent medicine taking and amateur prescribing In very many cases, even of acute disease, recovery will take place under proper care and watchfulness, without any drug taking whatever Both in acute and in chronic cases, many of the ends for which drugs are given can be better and more safely reached through the use of what may be termed natural or hygienic remedies namely, heat and cold, air, water diet, rest, exercise, including under the latter head, massage and electricity As the evolution of the human being has been achieved through action and reaction, with and in a certain environment, so action and reaction under specially adapted environments may modify physiologic and pathologic processes in such a manner as to assist in recovery from disease In this connection the effect of climate upon diet, and of altitude upon the respiratory and the circulatory apparatus is worthy of consideration, and also the circumstances and conditions in which diet climate and altitude may be made use of in therapeutics It is not necessary to go from home in order to secure many of the benefits of atmospheric change The inhalation of compressed and rarefied air by means of suitable apparatus may in Dr Cohen's opinion, be used to develop the lung and influence the circulatory organs, in the great majority of cases, so as to bring about recovery from pulmonary tuberculosis and afford great relief in emphysema, dilatation of the heart and other pathologic conditions in which the process has gone too far to permit a true cure Likewise, the use of heat and cold in subduing inflammations (as in pneumonia, certain diseases of the joints, chronic rheumatism, and the like), the use of cold water in typhoid fever, in neurasthenia and other nervous affections, the rest-cure, the treatment of pulmonary, cardiac, and other affections by suitable exercise, and the application of massage and electricity were briefly explained He believes that blood-letting is a useful therapeutic measure which should be resorted to more frequently than is the present custom, as in many cases it is preferable to the use of drugs The fundamental thought of the whole lecture was that by studying the means through which nature has brought the human organism to its present condition, endowed it with the power of resistance to climatic vicissitudes and inclemencies of the weather, as well as the ability to resist conditions of disease by automatic cell action, the physician may learn how to employ similar means in aiding the natural processes of resistance and recovery Although, while doing this, much assistance may temporarily be given by the timely and skillful use of drugs, it is a mistake to make them the sole dependence, and the lecturer called upon teachers and writers to lay greater stress upon those therapeutic measures other than drugs, which had been and always would be used by the best physicians

Hospital Notes

THE new St Vincent Hospital at Green Bay, Wis, was dedicated October 4 ——The monthly report of the Protestant Hospital at Columbus, Ohio, shows that there were forty-four patients admitted, and forty-six discharged during the month of September, leaving in the hospital October 1, twenty-five patients The annual report of the St Luke's Hospital at Utica, N Y, shows that there were 387 patients treated in that institution during the past year ——The annual meeting of the Women's and Children's Hospital Association of Syracuse, N Y, was held October 18 The report showed that 241 patients were treated during the year —— St Joseph's Hospital, at Memphis, Tenn, was dedicated October 6 ——The common council of Janesville, Wis, have voted to appropriate $500 a year to the Oak Lawn Hospital, a private charitable institution of that city, in consideration of the hospital receiving all city charity and emergency patients

Society Notes

THE annual meeting of the Mahoning County, Ohio Medical Society was held at Youngstown, Ohio, October 16, ——At the annual meeting of the Wayne County, Mich, Medical Society, the following officers were elected President, E B Smith, Vice-President, W R Henderson, Secretary, Frank S Hough, Treasurer, C Henri Leonard ——A quarterly meeting of the Fox River Valley Medical Association was held at Oshkosh, Wis, October 22 The annual meeting will be held at Green Bay, Wis, January, 1896 ——A regular meeting of the Northern Berkshire Medical Association was held in Springfield, Mass, October 17

Louisville Notes

RODMAN —Dr W L Rodman has returned from a four weeks' stay in Colorado where he went in search of health, much improved

DEATH REPORT —Sixty seven deaths have been reported during the past week Of these, 35 were males and 32 females, 53 white and 14 colored Diphtheria and typhoid fever caused 4 deaths each, scarlet fever 1, pneumonia, consumption and organic heart disease caused 6 deaths each, The contagious disease ordinance was not mentioned at the recent meeting of the general council

PALMER —The following invitation was issued by the Louisville Surgical Society to the physicians of Louisville New Albany and Jeffersonville

"The Louisville Surgical Society requests your presence at the Edward R Palmer memorial meeting Saturday evening the twenty-sixth of October, Eighteen Hundred and Ninety-Five, at eight o'clock, Alderman's Chamber City Hall, Louisville Ky"

The speakers were chosen by the Society from the faculties of the four medical schools as follows Kentucky School Dr J M Mathews, Louisville Medical College, Dr A M

Cartledge, Hospital College, Dr L S McMurtry, University of Louisville, Dr J M Bodine The ten minute addresses will be published in the Journal at an early date

St. Louis Notes

Weekly Mortuary Reports —The death rate for the week ending October 26, was 19 per 1000 The total number of deaths during the week was 204, as compared with 178 during the preceding week and 168 during the corresponding week of last year Births reported, 176

Contagious Diseases —During the week ending October 26, the following cases were reported diphtheria, 167 cases, 15 deaths, croup, 23, 18 deaths, scarlatina, 6 cases, typhoid, 12, 4 deaths, measles, 5 cases Thus far during October, 579 cases of diphtheria have been reported, which indicates the prevalence of the disease when it is compared with the epidemic of 1886, when 690 cases were reported during the month of November The high death rate among the cases of croup recently reported points to the need of greater accuracy in diagnosis and shows a failure to make use of the facilities afforded by the board of health for that purpose The board is investigating one case of diphtheria which was treated by a woman who professed ability to cure the disease A physician was called in only as the child was dying

At the State University measures are being taken to produce diphtheria antitoxin after the German method The work is in charge of Dr R E Graham, the newly-elected professor of bacteriology It is proposed to furnish the remedy at cost The project is under the supervision of the State Board of Health

The Saturday and Sunday Association is preparing for its annual charitable collection for the benefit of the charitable hospitals of this city The Saturday collection takes place on November 30, the Sunday collection on December 1 The work is conducted by committees of the Association, the members of which undertake a personal canvass of the various business interests, trades and professions On Hospital Sunday, collections are taken in all the churches The work of the Association is entirely non-sectarian, and the distribution of the money realized is apportioned to the hospitals, in accordance with the percentage of charitable work done during the preceding year

St Louis Medical Society —The program for October 26 included two papers on osteo-myelitis, and one on the use and abuse of uterine curetting

At the Commencement of the Rebekah Hospital Training School October 22, Dr I N Love made a very happy address to the graduates and Dr B M Hypes presented the diplomas The lively interest taken by the public in the education of nurses was well attested by a large audience

Dr A C Bernays, it is reported has at last received $5,000 as his fee for his operation upon the wife of the paranoiac, Duestrow Professor Bernays made an attempt to extract the bullet fired by the insane husband into his wife's brain, and succeeded in prolonging her life for a time His fee was placed at $15,000, but the compromise to $5,000 was finally effected

The Marion-Sims College of Medicine has signalized its prosperity and progress by the purchase of a large addition to its real estate The new ground gives the college nearly 200 feet on Grand Avenue with 258 feet on Carolina Street The new ground is acquired with a view to erect a large hospital, an enlarged dental department, and a laboratory

Washington Notes

Medical Society of the District —At the meeting of the Medical Society held on the 23d inst, Dr Mary Parsons presented an abdominal bandage for the retention of displaced kidneys She mentioned having treated seven cases Dr McLaughlin read a paper (and mentioned cases) on cycling as a cause of prostatic disease Dr E L Morgan read a paper entitled, "Did Jenner Discover Vaccination?" the paper seemed to prove that he did not Dr Necker presented a specimen of abscess of the liver (multiple) and read the very interesting history of the case

Professor of Clinical Surgery in the Columbian Medical School —Dr James Kerr has resigned the chair of professor of surgery in the Georgetown Medical College and accepted the chair of clinical professor of surgery in the Columbian Medical College

The Garbage Crematory Site —The Commissioners of the District have approved the Smith System Crematory for garbage, and have decided to locate the plant at the corner of 23d and Winter Streets The work of construction will be begun at once

Commissioners Report to Congress —The report of the Commissioners to Congress is completed and contains the following estimates two sanitary and food inspectors, who shall be veterinary surgeons, who shall act as inspectors of live stock, dairy farms, etc, at $1,500 and $900 respectively, an increase of $750 for the support of the chemic laboratory is asked Six new sanitary and food inspectors at $10,000 are recommended For the collection and disposal of garbage and dead animals, $57,000 For the purchase of a site and building for isolation hospital for the treatment of minor contagious diseases, $49,000 To prevent the spread of scarlet fever and diphtheria and other minor contagious diseases, including the maintenance of a bacteriologic and disinfecting service, $10,000

Washington Asylum including Hospital	$ 78,485
Government Hospital for Insane (St Elizabeth)	101,016
Emergency Hospital and Central Dispensary	15,000
Columbia Hospital including repairs ($5,000)	29,000
Children's Hospital	14,000
Homeopathic Hospital	9,250
Washington Hospital for Foundlings	6,000
Freedmen's Hospital	56,000
Eastern Dispensary (including $10,000 for grounds)	11 000
Washington Home for Incurables	3 000

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S Army, from October 19, 1895, to October 25 1895

Major Charles B Byrne, Surgeon, leave of absence granted is extended three months

Capt William H Arthur, Asst Surgeon, is granted leave of absence for one month

Capt James E Pilcher, Asst Surgeon, extension of leave of absence granted on surgeon's certificate of disability, is still further extended two months on account of sickness

Capt Ogden Rafferty Asst Surgeon, is relieved from duty at Benicia Bks Cal and ordered to Ft Bliss, Texas, for duty, relieving Major Clarence Ewen, Surgeon

Major Clarence Ewen, Surgeon, upon being relieved from duty at Ft Bliss Texas, will proceed to San Francisco, Cal and report to the president of the retiring board for examination

PROMOTION

Capt William H Corbusier, Asst Surgeon, to be Surgeon with the rank of Major, Oct 17, 1895, vice Cronkhite, retired from active service

RETIREMENT

Major Henry M Cronkhite, Surgeon, Oct 17 1895

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending October 26 1895

Asst Surgeon J C Rosenbleuth, to instruction at the Naval Laboratory.

LETTERS RECEIVED

Army and Navy Journal, New York, N Y, Arnold, E E, Warren, R I
Brown, P, Toronto Can
Criley, B H, Dallas Center, Iowa Carstens J H Detroit, Mich
Clouser, H D, Hartford City Ind Crothers, Thos D, Hartford, Conn,
Cochran, Jerome Montgomery, Ala
Day L T, Westport, Conn Daily Advertiser, Boston, Mass, Dickson,
C R, Toronto Can
Friedman, Harry, Baltimore, Md
Griffen, Catherine McHenry, Ill Girard, A C Fort Sheridan, Ill
Hills, J D, West Haven Conn Hubbell A N Buffalo, N Y
Laughlin John, Rantoul, Ill, Lewis, Henry F, Chicago, Ill, Love
I N, St Louis Mo
Magruder, G L, Washington, D C, Montgomery, L E, Philadel
phia, Pa
Poorman, W M, San Francisco, Cal, Pettit, J W, Ottawa, Ill
Priestly, J T, Des Moines Iowa, Pilsbry, A, Philadelphia, Pa
Roseberry B S, Lacon, Ill
Sykes, J A, New York, N Y Suiter, A W, Herkimer, N Y, Stod
dard L F Ramsey Ill
Woods, Hiram Baltimore, Md Woodruff, H W, Joliet, Ill, Wire G
E, Chicago, Ill

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ORIGINAL ARTICLES

PRACTICAL POINTS GAINED IN THE TREATMENT OF ONE THOUSAND CASES OF INSUFFICIENCIES OF THE OCULAR MUSCLES

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY J WALTER PARK, M D
Late Clinical Assistant Royal London Ophthalmic Hospital Ophthalmic Surgeon Harrisburg Hospital Children s Industrial Home and Home of the Friendless
HARRISBURG PA

As the title suggests, my paper is entirely on practical points gleaned from a rather extensive experience in the correction of errors of refraction I examine the ocular muscles of every case that I refract and when any muscular insufficiency is discovered, a record of it is made The subject of heterophoria or insufficiencies of the ocular muscles has become one of such vast importance that I hesitated for some time, wondering whether I had sufficient experience with a large enough number of cases to justify me in expressing an intelligent opinion In looking over my case book I find a record of about a thousand cases, of which I kept rather accurate notes, and I think the results obtained will support the views I entertain upon this subject After all, it is following up one's cases and watching the results for several years afterward that gives us the experience worth placing upon the records of ophthalmology My notes of cases include all muscular insufficiencies, those which I considered should only have general hygienic treatment, those who should have hygienic treatment as well as their errors of refraction corrected combined with the use of prisms Of all my cases I find about 75 per cent of them insufficiencies of the external recti, 25 per cent of the internal, and but two-thirds of 1 per cent of all the other ocular muscles Insufficiencies of the external recti, were most frequent in low degrees of hypermetropia and hyperopic astigmatism, averaging about 70 per cent and about 30 per cent of the interni Insufficiencies of the interni and externi in myopia and myopic astigmatism occurred in about 6 per cent of all the cases

I will consider the management and treatment of these cases under the following classification 1, those occurring in hyperopia and compound hyperopic astigmatism, 2, those occurring in myopia and compound myopic astigmatism, 3, those occurring from constitutional, paralytic, and reflex causes

Under the first classification the majority occurred in cases ranging from + 25 astigmatic, to a + 75 either hyperopic or compound hyperopic cases The degree of variation ranging from 5° to 3° in the majority of cases The insufficiencies occurring in refractive errors from + 75 D to +6 D generally range from 3 to 20° of deviation The majority of cases occurring in the lower refractive errors, ranging from 5° to 3° were no doubt due to spasm of the ocular muscles, and were generally relieved by correcting the errors of refraction, and proper outdoor exercises, and in those cases in which I did use prisms, it was generally only for a few weeks at the longest, when they would finally be more comfortable without them I am now speaking of average results

I wish to impress the fact that I obtained good results in most cases of moderate degrees of insufficiencies, by correcting the errors of refraction, and the advice of complete rest of the eyes for close work for some time, outdoor exercises and general tonic treatment In patients with nervous temperaments, one-thirtieth gr strychnia, and the triple valerianate pills, three times a day did very well in many muscular insufficiencies varying from 5° to 3° I have seen a case of esophoria of 20°, reduced to 6°, within two weeks, from outdoor exercise alone, when no close work was done during that time This patient has been doing continuous close work with ease for the past three months, with a 3° prism, but has no errors of refraction I find very few muscular insufficiencies exist among patients who lead outdoor lives, such as farmers, ironworkers, lumbermen, etc Operative measures are seldom necessary in the majority of muscular insufficiencies

A music dealer, who is myopic and reads music almost constantly, came to me nine months ago with an exophoria of 30° diplopia, and mentally very much distressed, caused by the condition of his eyes I wanted to perform a tenotomy, but he would not allow it I then advised complete rest from close work, and outdoor exercise I did not see him for seven months He then came to my office feeling quite comfortable, no diplopia, and at his usual occupation again

I think tenotomies are necessary in but few cases, and then only where diplopia exists, the insufficiency of a permanent character, suffering considerable, and all other remedies fail In those varying from 3° to 15°, the majority of cases found relief in prisms (combined with their refractive errors corrected) correcting from one-half to two-thirds of their insufficiency Some of these cases when they are obliged to continue at their usual occupation, find relief for from six months to two years, when you generally find their muscular insufficiency has increased and operative measures may be necessary, or they will be obliged to stop their close work This, most patients can not afford to do, and something must be done to relieve them, or you lose your case Exercising with prisms has met with but partial success in my practice I find that the majority of patients will not follow out one's instructions at home, properly, and to come regularly to the office to have it done, incurs an expense which most of them can not meet plying this muscle, just as we may have isolated paralysis of single pairs of muscles in the larynx supplied by the recurrent laryngeal

Thus, the one case in which refraction was Em had had lues some years before Anti-luetic treatment instituted cured the case It seems but reasonable to suppose that lues can affect a muscle which we know is, by weight and measurement, the weakest of all ocular muscles

When after a reasonable delay, medical treatment does not suffice, we must resort to surgery, not to tenotomy of the depressor of that eye or even of the sound eye, but either to advancement of the superior rectus at fault, or tenotomy of the sound one Nowhere is sufficient stress laid upon this Noyes advises tenotomy of the antagonistic muscle and generally that of each eye, when speaking of paralyses of the externi and interni, but says nothing about this special form Possibly, we think no one would be foolhardy enough to try tenotomy of the inferior rectus to remedy the evil

The *first* case of this series, who was rid of his troublesome diplopia by just such an operation, I believe was a case of paralysis of the superior rectus This, on the face, would appear feasible, as these two muscles are antagonistic in just that sphere of action which causes the asthenopia All agree ordinarily, *that some form of prismatic correction* will suffice, especially when coupled with muscular exercise

In the minor affection of this muscle, just a word in conclusion I doubt if any careful worker fails to test muscular equilibrium in every case of asthenopia I am sure you will find many cases of vertical deviation amounting to as high as 1 5° and, indeed, I have seen several higher than this, in which the correction of the refraction sufficed Just how common this is, I should hesitate to say, but in my last hundred cases of asthenopia, I found twelve with various degrees of hyperphoria, and of these but one required correction for a hyperphoria of 1 5°

Though my experience is naturally somewhat limited, I am still at a loss to understand how it is that some men find such frequent and urgent need for correction of hyperphoria of even 25° I should not for one moment wish to be understood as doubting the accuracy of this observation, I simply do not meet with such cases

Finally, it seemed that the American ophthalmological world was in danger for a time of going heterophorically mad It appears that the pendulum is beginning its backward swing, and we may now be approaching a more rational conception of this subject

My attention was called during the session to a condition of diplopia which is normal to every one That is, in near vision, even as far off as one to two meters, you can produce a diplopia very much like that of the paralysis of the superior rectus but the images are not tilted, and this diplopia disappears in the distant vision test, which is not the case where a true paralysis of the muscle is present

800 Madison Avenue

When Physicians can not Testify in Pennsylvania —No person authorized to practice physics or surgery, it has been enacted in Pennsylvania, shall be allowed, in any civil case, to disclose any information, which he acquired in attending the patient, in a professional capacity, and which was necessary to enable him to act in that capacity, which shall tend to blacken the character of the patient, without his consent

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REPORT OF THE COMMITTEE ON THE PREVENTION OF BLINDNESS FROM OPHTHALMIA NEONATORUM

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md, May 7-10 1895

BY *LUCIEN HOWE, M D*

BUFFALO, N Y

At the meeting of the AMERICAN MEDICAL ASSOCIATION held in Milwaukee in 1893, the following resolution was unanimously adopted by the Section on Ophthalmology

WHEREAS, There are in the United States several thousand who have become blind because of ophthalmia neonatorum; and

WHEREAS, This unfortunate result is largely preventable, being due to the neglect of nurses and midwives, therefore

Resolved, That it is the sense of this Section of the AMERICAN MEDICAL ASSOCIATION, that a committee of five be appointed by the chair to urge in all parts of the country, by personal application, by circulars to physicians and legislators, and by blank forms of a desirable law, such legislation as will tend to lessen the blindness caused by this disease

Upon careful consideration, it was decided that the following would be about the best form of a law to suggest for adoption in the various States, this being almost the same as that which had already been passed in New York, Maine and Rhode Island:

SECTION 1 —Should one or both eyes of an infant become reddened or inflamed at any time after birth, it shall be the duty of the midwife, nurse, or person having charge of said infant, to report the condition of the eyes at once to some legally qualified practitioner of medicine of the city, town, or district in which the parents of the infant reside

SEC 2 —Any failure to comply with the provisions of this act shall be punishable by a fine not to exceed one hundred dollars, or imprisonment not to exceed six months, or both

SEC 3 —This act shall take effect on the first day of June, eighteen hundred and ninety one

Early in December, 1892, a circular letter was sent to all of the prominent ophthalmologists throughout the country, asking their cooperation in obtaining such legislation They were requested to call the attention of the several State medical societies to the importance of the subject, and to ask these societies to give their approval of such a law in order that committees could present the matter to the Legislature with the strongest medical indorsement

About four hundred and ten of these first letters were sent to ophthalmologists and to leading physicians in various States, and the replies, together with suggestions in regard to the legislation, necessitated the writing of two hundred and fourteen additional letters Of all of these, copies are on file of the letters sent and the replies also have been retained

The accompanying is a tabular statement of the most recent data that can be obtained, in regard to the condition of legislation for the prevention of blindness, each State being given alphabetically

To sum up the results, they may be stated as follows

The law had, in substance, already existed in three States New York, Maine and Rhode Island

Since then, it has passed both houses and been signed by the Governors of six States Minnesota, Ohio, Maryland, Connecticut, Missouri, and New Jersey

It is therefore in operation in a population of over eighteen million Moreover, a sufficient number of

THE PRESENT CONDITION OF LEGISLATION FOR THE PREVENTION OF BLINDNESS

State	Will Co-operate	Resolutions Favoring Legislation Adopted	Committee Appointed	Legislation
Alabama	Dr B J Baldwin Montgomery ' S L Ledbetter, Birmingham ' W H Sanders Mobile Y G Woodson Birmingham			
Arkansas	Dr H Moulton Fort Smith ' J W Scales Pine Bluff " George W Smith, Fort Smith ' C S Gray, Little Rock	State Med Soc May 1894		
California	Dr W D Babcock Los Angeles " A Barkan San Francisco " H Bert Ellis, Los Angeles ' George H Powers, San Francisco " W F Southard San Francisco	State Med Soc, Dec, 1893		Bill presented in Senate
Colorado	Dr John Chase, Denver ' F D Green, Pueblo " E C Rivers, Denver " J R Robinson Colorado Springs " C E Walker, Denver			
Connecticut	Dr W Y Bacon Hartford ' H W Ring, New Haven ' S B St John, Hartford			Law passed
Georgia	Dr A. W Calhoun, Atlanta ' R O Cotter, Barnesville ' James M Hull, Atlanta ' C H Peete Macon			
Illinois	Dr Boerne Bettman, Chicago " W F Coleman Chicago " Henry Gradle, Chicago " C D Wescott Chicago	At State Medical Society, held April 16, 1894	Dr B Holmes, Chicago ' E J Doering, Chicago " Boerne Bettman Chicago Chairman	Bill presented in Senate
Indiana.	Dr A Blitz Indianapolis " Geo H Keiper La Fayette ' I P Morrell Terre Haute ' J L Thompson, Indianapolis	State Med Soc, May 1894	Dr George H Keiper La Fayette J L Thompson Indianapolis " A Blitz, Indianapolis " F C Heath Indianapolis " A F Schaffer, South Bend	Passed one house defeated in other
Iowa	Dr J C Dunbary Sioux City C M Hobby Iowa City ' Henry B Young Burlington ' W C Pipino Des Moines	At State Medical Society 1894		Passed one house, defeated in other
Kansas	Dr G A Wall Topeka			
Kentucky	Dr William Cheatham Louisville S C Dabney Louisville " J M Ray Louisville	South Eastern Kentucky Medical Society, July 1894		
Louisiana*	Dr H D Bruns New Orleans			Passed Senate defeated in House
Michigan	Dr Don M Campbell Detroit ' F Carrone Ann Arbor Leartus Connor Detroit J M Cook Muskegon Robert W Gillman Detroit " D M Greene Grand Rapids ' J F Noyes Detroit	At State Medical Society, May 1894.	Dr F Carrone, Ann Arbor Chairman ' R W Gillman Detroit ' Don Campbell, Detroit	Bill presented in House
Missouri	Dr Y E Murrell St Louis			Law passed
Montana				
Nebraska	Dr H Gifford Omaha. Isador Gluck Omaha			
New Hampshire				Presented in the House
New Jersey	Dr Walter B Johnson, Paterson	State Medical Society, held June 26, 1894	Dr Walter B Johnson Paterson Chairman ' Charles I Kipp Newark P A Harris, Paterson	Law passed
North Carolina	Dr Richard H Lewis Raleigh	At State Medical Society, 1894	Dr A W Knox Raleigh. ' Hubert Haywood, Raleigh ' K P Battle Raleigh ' Y S Burbank Washington ' Y D Haigh, Fayetteville	
Oregon	Dr S G Eaton Portland	State Medical Society, 1894		
Pennsylvania	Dr J A Lippincott Pittsburg " G de Schweinitz, Philadelphia ' P D Keyser Philadelphia C L Frey Scranton " G M Gould Philadelphia ' Charles A Oliver Philadelphia Charles McIntire Easton G Oram Ring Philadelphia " John B Roberts Philadelphia. " P N K Schwenk Philadelphia " Lewis H Taylor Wilkesbarre	State Medical Society held May, 1894	Dr F H Hansell, Philadelphia Chairman ' J A Lippincott, Pittsburg ' Schneiderman Philadelphia	Bill presented in Senate
South Carolina	Dr Charles W Kollock, Charleston.	At State Medical Society 1894		Passed one House defeated in other
Tennessee	Dr L C Graddy Nashville ' G C Savage Nashville			
Vermont	Dr J H Woodward, Burlington			
Washington	Dr R L Thompson Spokane			
West Virginia	Dr G A Ashman, Wheeling	At State Medical Society 1894		

* The law passed the Senate but was defeated in the House Will be presented again

convictions have already been obtained to show the efficiency of some such measure when prosecution is properly carried out

It has been presented and referred to committees in five States Pennsylvania, California, Michigan, New Hampshire and Illinois

It has passed one House and been defeated in the other in four States Louisiana, South California, Iowa and Indiana In each of these, the committee intend to present it next year

In four States Arkansas, Kentucky, North Carolina and West Virginia the bill has been indorsed by local or State medical societies but no effort made to present it to the Legislature

In the other States, no official action has been taken in regard to it It is important to note, however, that more than eighty ophthalmologists and other prominent physicians have promised in writing to give their coöperation and hearty assistance to such legislation, and, with the plan thus thoroughly organized in so many portions of the Union, it is not too much to hope that a few years will find this law or its equivalent on the statute books in nearly every State in the Union. The committee desires thus to report progress.

Signed, LUCIEN HOWE, M.D.,
GEORGE M. GOULD, M.D.,
G. C. SAVAGE, M.D.,
HENRY GRADLE, M.D.

The above report with the table represents the information obtained by the committee at the time the report was made. It should be said, however, that since then practically the same law has been passed in Pennsylvania and Illinois, so that at present it exists among a total population of over twenty-eight million people.

183 Delaware Avenue, Buffalo.

NOTE.—The above report with the table represents the information obtained by the Committee at the time the report was made. It should be said, however, that since then practically the same law has been passed in Pennsylvania and Illinois, so that at present it exists among a population of over twenty-eight million people.

THE RELATIONSHIP BETWEEN THE EYES AND THE BRAIN.

Read in the Section on Ophthalmology at the Forty-sixth Annual Meeting of the American Medical Association at Baltimore, Md., May 7-10, 1895.

BY JAMES A. LYDSTON, M.D., PH.G.

Oculist and Aurist to St. Joseph's Hospital, Chicago; Lecturer on Ophthalmology and Otology, Chicago College of Physicians and Surgeons; President of the Alumni Association, Chicago College of Pharmacy; Member of the American Medical Association, the Chicago Academy of Medicine, etc.

CHICAGO.

The frequency of eye disease originating from brain lesion is all sufficient to render an attempt to trace a closer relationship between the eyes and the brain justifiable and merits, by reason of its utility in ocular and brain diagnoses, very careful consideration. If we are dealing with structural ocular changes we are often able to define the etiologic factor at once, but at times we are confronted by functional disturbances which are but vaguely explicable; under such circumstances if we could only view the eyes as a component factor of the cerebral and cerebellar mechanism, obscurity in diagnosis would vanish. I have always regarded the eyes as nothing more nor less than prolonged bulbous expansions of the optic nerves with altered anatomic characters to meet the requisites of their physiologic necessity, viz., to formulate and receive impressions of the external world and, carrying the analogy a step further, we find that the optic nerves are but the telegraphic media of conduction extending from the perceptive center or brain and finally terminating in their bulbous expansions, the eyeballs,—so that the eyes may be justly regarded as the terminal filaments of the optic nerves, and we accordingly note that sources of peripheral irritation excite central phenomena, while *per contra*, in the majority of instances the initial pathologic process appears in the brain and travels downward along the nerve or its sheaths, as in descending neuritis arising from cerebral tumor or other central morbid process.

Anatomic data are likewise corroborative of an intimate association of the eyes and the brain, for notwithstanding the attempt to separate the optic nerve fibrillæ into separate and distinct bundles, we find that there is here and there along the nerve a complete fusion, so that it is only possible, according to Uhthoff, to separate the macular bundle as a distinctly central bundle in close proximity to the chiasm. See too, how intimately the optic nerves are connected with the brain. This connection is chiefly a threefold one, for we have a large part entering the external geniculate body, another part the thalami optici and pulvinar, and another the anterior corpora quadrigemina; thence from these so-styled primary optic ganglia, fibers are traceable to the posterior third of the internal capsule midway between the lenticular nucleus and optic thalamus, extending under the name of Gratiolet's optic radiation to the cortex of the occipital lobe, and chiefly to that part of the cortex which is styled the cuneus, terminating, finally, in the ganglion cells of the cortex within a region which has received the appellation of the optical cortical area, or visual sphere of Munk, which in turn is intimately connected by means of bundles of associating fibers with the cortex of the frontal, parietal and temporal lobes of the same side, and we are in a position to infer from the connection of homonymous parts of the cortex of the two sides by means of commissural fibers, the chief of which is the corpus callosum, that an intimate association between the various cortical elements is maintained. Then too, the semi-decussation of the optic nerves seems to have been designed by Nature among her allwise provisions as a means of creating a more intimate relationship between the eyes and the brain.

We note further that the eye undergoes degenerative change when its central connections are divided, and again, ascending atrophic optic nerve changes supervene when destruction of the eyeballs has occurred which, following the experiments of Gudden, I have myself fully verified in experimenting on rabbits, destroying one or both eyes and observing the course of the consequent atrophy. And while such changes are only approximate as applied to man, still opportunity to determine this question postmortem has been afforded several observers, and their findings are fully in accord with the generally accepted conclusions applicable to nerves. We know that when a nerve is divided in an adult, degeneration ultimately extends as far as the terminal network, implicating those ganglion cells whose axis cylinders extend through the same nerve, and later other groups of ganglion cells become involved as a result of contiguity, extension of some inflammatory process or otherwise,—and here it may be well to emphasize the changes that are consequent upon destruction of both optic nerves, or obliteration of the chiasm; necessarily they are bilateral, *i. e.*, in all cases in which a lesion lies on the central side of the chiasm, the ocular manifestations are symmetrically exhibited in both eyes, while asymmetrical phenomena in both eyes, as well as monocular visual defects, are referable to a lesion in the optic nerves proper, or anteriorly to the chiasm. If the lesion divides the chiasm vertically we have hemianopsia as illustrated by Weir Mitchell's case, cited in the *Journal of Nervous and Mental Disease*, 1889, p. 44, in which an aneurysm had completely divided the chiasm in the median line and caused blindness of both inner retinal halves. With respect to the importance of either one of the three primary optic ganglia in the rôle of the visual act, it is unfortunate that investigators have reached no concordant results, owing to the rarity of clearly defined examples of isolable lesions implicating one or the other of the primary ganglia, and the fact that we are unable to extend our experimental researches to the human family Crossed hemianopsia has been known to follow obliteration of a single pulvinar, while destruction of the anterior corpora quadrigemina has ensued without perceptible visual impairment, although I believe Gowers is authority for the statement that choked disk in which blindness was not a conspicuous feature has followed injury of the anterior corpora quadrigemina, however, the general consensus of opinion of investigators is that the anterior corpora quadrigemina preside over movement of the extrinsic ocular muscles, their nuclei being intimately associated with them

If we consider the comparatively small surface area of the retina, we are surprised to find that the bundles of optic nerve fibrillæ are so numerous, and again, when we consider the minuter and all-important papillo macular region we note that the most important conducting fibers are here disposed, and as we are justified in assuming that the papillo-macular bundle is formed by an agglomeration of optic nerve fibrillæ, each one of which has an intimate as well as individual connection with the brain, we must conclude that the eyes are simply outlying cerebral structures, so placed as to meet the exigencies of their function, and in cases of sympathetic irritation which in many instances precedes general ophthalmitis, we are able to readily appreciate the rationale thereof, although in accordance with the definitive experimentations of Deutschmann, and conforming to the most recent bacteriologic research, we ascribe the occurrence of sympathetic ophthalmitis to the transmission of germs through the medium of the optic nerve sheaths, rejecting the theory of nerve irritation After accepting such an intimate association of the eyes and the brain, it would not be unreasonable for us to expect that ophthalmoscopic investigation would at once reveal the cause of cerebral and sequelar ocular changes, but unfortunately such is not the case, for the reason that the cerebral and optic nerve circulation is governed by the amount of blood, not alone in the carotid, but depends upon the entire circulation in the circle of Willis, which in turn depends upon cardiac tone, and while increased or diminished blood pressure in the carotid might excite retinal hyperemia or ischemia, it would be no positive criterion as to the nature or gravity of the pathologic cerebral change However appropriate the attempt to define a coarse relationship between the eyes and the brain, we are still confronted by the necessity of tracing the distribution of the optic nerve fibrillæ in the brain, or, as it is usually styled, the origin of the optic nerves, in order to explain many of the symptomatic ocular phenomena characteristic of morbid cerebral and cerebellar processes Unfortunately, we are still unable to assume a positive stand in this direction, and yet that which is positively known in this regard enables us to classify many changes with a reasonable degree of assurance Thus we know with respect to cortical visual disorders, *i e*, those which are situated on the central aspect of the primary optic ganglia, heretofore mentioned in Gratiolet's optic radiation and in the cortical portion of the occipital lobes, that 1, central disturbances necessarily induce homonymous ocular phenomena, 2, ophthalmoscopic manifestations are absent, 3, involuntary light reaction is present, even if optical memory pictures are not elicited We find that destruction of the cuneus in man, induces marked hemiamblyopia in the opposite half of the visual field, or the same effect as the obliteration of the entire cerebral cortex, which proves a uniform distribution of all optic nerve filaments, all theoretical reasoning to the contrary Schaefer, Munk and others have demonstrated by experimentation upon animals, and clinical data support their findings, that feeble electrical stimulation of the occipital cortex causes conjugate ocular movements to the opposite side, upward when applied posteriorly, downward when applied anteriorly, which indicates that the brain exercises control of voluntary motor ocular movement and presides over orientation, enabling us to ascribe the proper position of an object in the visual field

Embryology also teaches us that there was primarily a very intimate relationship between the brain and the eye, and that the eye has virtually evolved therefrom, for the eye develops from an invagination from both sides of the primitive cerebral vesicle, which invagination is styled the primitive ocular vesicle, and remains attached by means of a broad pedicle which subsequently contracts and forms the optic nerve. This pedicle is enveloped by the ectoderm which at the apex of the ocular vesicle becomes thickened, constituting the first germ of the lens which ultimately is reduplicated by reason of the more speedy development of the ectoderm and appears as a pouch like eversion which subsequently closes, forming a sac—the lens vesicle The retina is likewise derived from the primitive ocular vesicle and is therefore regarded by many as a remote part of the brain, and in accordance with embryologic development we are certainly at liberty to regard the eye as a whole, as a cerebral appendage Again, when we consider how intimately associated the ocular mechanism and the nervous system, as a whole, appear to be, as fully borne out by the various symptomatic phenomena such as cephalalgia, migraine, vertigo, visual hallucinations, asthenopia, various types of hyperesthesia, scintillating scotoma, reflex phenomena, and very often in cerebral hemorrhage we find transitory homonymous hemianopsia in the visual field of the side opposite to the hemorrhage —we must conclude that the connection between the eyes and the central nervous system is very close In cases of cerebral hemorrhage too, while occasionally there may be ophthalmoscopic findings due to the hemorrhage, more frequently do we find pathologic changes in the eyes that arise from the same cause as the cerebral hemorrhage Thus neuritis, albuminuric retinitis and neuro retinitis are signs of similar brain changes, while retinal and subhyaloid hemorrhages are indications of a general atheromatous tendency

804 Champlain Building

LYMPHANGIOMA CAVERNOSUM OF THE ORBIT

WITH AN ORIGINAL CASE

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md., May 7 10 1895

BY S C AYRES, M D

CINCINNATI, OHIO

Mr C, age 53, was first seen May 15 1894 At that time there was a well marked proptosis of the right eye, which he said had been coming on for about three years He had had no pain in the eye or the orbit He could count fingers at

3′ but the inner field seemed to be more sensitive than the outer field There was well marked optic neuritis Motion of the eye was unimpaired The diagnosis given was a probable sarcoma beginning in the apex of the orbit

He has generally enjoyed excellent health and has been an active business man Family history his father died at 70 and his mother at 83, one sister living and in good health, and two sisters deceased—one from a malignant growth and one from childbirth It was impossible to detect any growth around the rim of the orbit and it seemed evident that the growth, whatever it might be, was located in the apex of the orbit and was pressing the eye directly forward

He was not seen again until Nov 26 1894 In the meantime the tumor had grown very considerably, and the proptosis was very marked The eye now stands about 8 mm in advance of the plane of the left eye Motion upward was limited and the eye diverged, as if pushed out in the axis of the orbit The optic disk was very considerably swollen, and vision was 0 2 Within the past few weeks he has had three severe attacks of pain in the head, lasting several hours each time, and during them he had a tingling sensation in the right side and some delirium There has also been at times a well marked mental hebetude He became listless and sleepy, and lost interest in everything around him When his wife read to him, he would fall asleep or would lose interest in what was read, or in conversation He has had a large number of nasal polypi removed within the past year, but there was no evidence of any malignant growth in the nasal fossæ The increasing exophthalmos and the mental hebetude and the attacks of pain in the head made him decide to submit to surgical interference for relief There is no evidence of any growth in the orbit from palpation nor was there any bruit or pulsation He was told that an attempt would be made to remove the tumor and save the the globe, if such was found practicable, after its size and character had been sufficiently obtained in the first steps of the operation The external rectus was first severed, leaving a stump on the sclerotic, so that it could be used for reuniting the muscle in case the tumor could be removed without sacrificing the eye After getting an opening sufficiently large for me to make an exploration with my finger, I found that I had to deal with a large elastic tumor, which grew within the muscular funnel The optic nerve was on its anterior surface and put greatly on the stretch In view of the injury to all the ocular muscles and optic nerve from an attempt to remove so large a tumor, I decided to enucleate the tumor and globe together The growth filled the bony walls of the orbit so closely that there was some trouble in detaching it, but this was finally accomplished and the optic nerve severed at the very apex of the orbit

Macroscopically, the tumor presented a whitish appearance and was firm but elastic The optic nerve was attached to it by bands of connective tissue It measured 35 mm in length, the diameter of the outer end was 22 mm, and that of the inner end 13 mm

It is now five months since the operation, he has had no pain in the head, and the mental dullness and apathy have entirely disappeared He takes an active interest in everything around him, and has regained his former mental activity This has been one of the striking features of the case

The microscopic examination was made by my friend, Dr J E Greiwe, whose letter I copy

"*Dear Doctor* —I have examined the specimen which was removed from the orbital cavity, and I send you a few preparations stained with Boehmer's *hemotoxylin* I do not think there can be much doubt about the nature of the growth, and, while one would certainly be justified, from a macroscopic examination of the tumor, in coming upon the suspicion of ecchinococcus, yet there is nothing to justify the diagnosis microscopically There are no hooklets, no characteristic membrane, etc The new growth, if you may call it in the strict sense of the word a new growth, is characteristic of lymphangioma Macroscopically, you will notice that the preparation shows many small cavities The tumor itself is composed for the most part of lymphoid cells, both large and small, the cavities are for the most part lined with an imperfect layer of endothelium, and within these cavities are numerous lymphoid cells lying about loosely There are no traces of blood vessels, and there is no evidence of glandular formation Lymph vessels are numerous and large, and these larger ones are lined with a perfect layer of endothelium The examination agrees also with the clinical history of the case I think the trouble originated from an occlusion of one or more lymph channels causing an engorgement, which in the course of so long a time resulted in a mass of this size My diagnosis is lymphangioma cavernosum

Very sincerely,

(signed) J E Greiwe"

The literature at my command shows only two similar tumors and probably a third The first one is by Forster, in *Gracfe's Archiv.*, vol xxiv, 2, p 107 The second is by Wiesner, *Gracfe's Archiv*, vol xxxii, 2, p 205, and the third by Dunn, *Am Jour*, *Med Sciences*, 1894 There may be other cases of similar character, but I have not access to them In consideration of the rarity of the disease, I have made translations from the above cases and have added notes from Ziegler and Michel

In Forster's case the tumor was situated within the funnel of the ocular muscles, as was mine, and was about the same length but broader In this case, however, there was no mental disturbance and no pain In mine, the mental hebetude seems to have depended on the influence of the tumor The tension of the tumor on the optic nerve must have been very considerable, as the nerve was found lying *over its anterior* surface We can not calculate from other statistics, as they are wanting, the probable or possible influence of such a stretching of the optic nerve on the brain, but in my case they seemed to stand to each as cause and effect

In Wiesner's case the tumor was located between the globe and the lower outer edge of the orbit, and was ovoid in shape and movable

In Dunn's case, the patient was a leukemic boy, 8 years of age, and the tumors were above the eyes and attached to the orbital arches, and there was no impairment of motion or vision

There is an apparent inconsistency in the vision of the eye when examined in May and November At the first date he could count fingers at only 3′ and in November he had a vision of 0 2 I can only account for the difference by the variation of pressure on the optic nerve

1 Professor R, *Gracfe-Sacmisch*, vol vi, Berlin, page 700, (quoted from Forster, *Arch fur Ophthal*, xxiv, 2, p 108) The only case reported up to date (1875) is reported by Forster "For the past ten years, Nicholas B has had a steadily growing protrusion of the eyeball Status V = movements of the hand and one foot The skin of the lid is red, and the veins varicose The globe is strongly abducted, and with difficulty pressed backward Movements of the globe are greatly interfered with, especially upward and inward Palpation of the inner side of the orbit gives one the sensation of a slightly movable, soft, in places nodular tumor about the size of a nut Pulsation distinct, auscultation negative Ophthalmoscopically white atrophy of the optic nerve with but slightly filled vessels Clinical diagnosis sarcoma fibromatosum orbitæ Enucleation of the globe and tumor Healed in six days No recurrence Macroscopic examination within the muscular funnel to the inner side and below the globe, was found a soft elastic tumor 37 mm long and 35 mm broad, which was inclosed in a capsule On section the entire tumor showed itself permeated by spaces of various sizes, between which are broad bands of fine connective tissue Microscopically, the inner walls of the alveoli are lined with endothelial cells The walls themselves are formed by layers of connective tissue fibers, between which are spindle cells which are arranged

concentrically to these cavernous spaces The spaces contain numerous lymphoid cells, whereas the fibrillary walls show large quantities of elastic fibers and blood vessels "

The clinical character of this tumor coincides most remarkably with that of a cavernous angioma The slowness of its growth, its painlessness, its seat within the muscular funnel, the retention of a certain amount of movement in all directions, its soft elastic consistence, which the specimen showed, in short, the only symptom which was lacking and which in this instance was not sought for is the swelling, to have made this a complete picture *We must, further, not forget the most important fact, that this even in itself rare form of tumor, a cavernous lymphangioma, is found here for the first time in a tissue in which, anatomically, up to the present time, no true lymph vessels have ever been found*

Owing to this being a single isolated case which up to date has been reported as occurring in the orbit, the writer (Berlin) is prompted to give it thoughtful criticism This would certainly not be possible if the microscopic examination of the alveolar contents had given us a completely convincing result But he simply states "The areolar spaces contained numerous lymph corpuscles " It certainly would have been of great importance to know whether there had been any other morphologic elements present The fact, as the author states, that the specimen was preserved for one and one half years in Muller's fluid and alcohol before the microscopic examination was made, might certainly give us a reason for the difficulty in recognizing red blood corpuscles The course seems to be an exceedingly slow one Prognosis as regards the general condition is good As a rule, as a result of pressure on the optic nerve or on the globe or both, it leads to atrophy even destruction of the globe Therapy extirpation

2 Ziegler's "Pathology," vol ii, page 304 Published 1891 "The angiolymphaticum, or the lymphangioma, bears to the lymph system exactly the same relation, that the angiom does to the vascular system It consists principally of a dilatation of lymph vessels, which is at times associated with a hypertrophy of the lymph vessel walls and the tissue between them It is possible to differentiate between a lymphangioma simplex or telengiectasia lymphatica, and a lymphangioma cavernosum We must still mention a third form, the lymphangioma cystoides As one may see from the nomenclature, the configuration and size of these dilated lymph vessels varies greatly In the most pronounced change, veritable cysts are formed The contents of these spaces is mostly a light and clear, exceptionally a milky lymph The condition is partially congenital, partially acquired The congenital lymphectasies are found in various forms, as in the tongue, (macroglossie), the dental arches, the lips (makrocheilie) in the skin (nævus lymphaticus), on the neck (hyroma colli congenitum) the labia majora, etc It is not unfrequent to find the lymphectasie in the skin as an acquired condition, for example, on the thigh and on the scrotum At times they form extensive, circumscribed, fluctuating tumors (Fig 157) The ectatic and cavernous lymph vessels show thickened walls, and have their seat more especially in connective tissue and fatty tissue, owing to extension of this cavernous development of lymph vessels over a large surface of the subcutaneous tissue of the skin and may cause an elephantiasis-like disfigurement of the part Not infrequently the tissues which lie between this growth also undergo a hypertrophy If these cutaneous lymphangioma burst, a lymphorrhea ensues Not infrequently we find hyperplasia of the skin and other organs complicated by the ectasie of the lymph vessels of the skin In very exceptional cases, chylangiome of the intestinal wall and the mesentery have been found, and exceedingly seldom, cystic lymphangiome of the peritoneum "

3 Michel, *Augenheilkind*, 1890, page 649 "Cavernous angioma and lymphangioma may occur primarily in the orbit They are most frequently found in the muscular funnel, less frequently between the latter and the bony wall The latter is the case when the tumor has extended by growth, and this most frequently extends toward the roof of the orbit The lymphangioma, it may further be stated, occurs in the latter years of life (about the fortieth year) and may then occur primarily between the muscular funnel and the edge of the orbit The symptoms at first may be very slight, simply causing a slight impediment to free movement, thus leading to diplopia As the tumor grows, the eye is pushed forward The surface of the tumor as a rule is smooth, sharply defined, movable and compressible Anatomically, the tumor is made up of connective tissue, the alveoli are lined with endothelial cells, contents, a serous fluid containing lymphoid cells *Lymphome have been observed in the orbit at the same time with others in the lid, in leukemia* " (See page 11)

4 Thos J Dunn, case of leukemia with rare lymphoid growth of orbits and parotid gland The *American Journal of Medical Sciences*, 1894 "Boy 8 years, highly leukemic Growths in the orbits were crescentic above the eyes and not firmly connected with the lids beyond the nasal side of orbits and extended to the external canthus, and were firmly attached to the orbital arches Not painful Considerable exophthalmus Motions of eyes not much interfered with Eyes healthy otherwise Vision normal No autopsy allowed "

5 B Weisner, "The Lymphangioma of the Eye," *Graef Arch* , vol xxxii, B 2, page 208 Case seen in November, 1885 History patient 43 years old Tumor of lower lid Since past two months, diplopia Status weak hypermetropia Complete loss of function of right rectus inferior Between globe and lower outer edge of the orbit is an ovoid movable tumor, about the size of a hazelnut, hard consistence, smooth surface No exophthalmus Diagnosis fibroma of the orbit in tissue between the peri orbital and rectus muscle Operated one week later, November 13 Incision made parallel to the lower orbital edge just below the same, and the tumor, which was loosely connected with the peri-orbita and muscular funnel, was easily peeled out without loss of blood Healed by first intention Patient discharged on fourth day (*a*), *macroscopic examination* tumor 77 mm long, 9 mm high, 5 mm thick On incision a serous fluid escaped Tumor showed a cavernous structure with relatively large and some smaller spaces, showing a striking likeness to the cavernous structure of the corpus cavernosum of the penis Tumor was covered with a thin fibrous sheath (*b*), microscopic examination made partially on teased preparation, partly on sections stained with hemotoxylin The lax tissue around the tumor is concentrically arranged, rich in fat and blood vessels, whose

walls are hypertrophied The fat is infiltrated with lymphoid cells Accordingly the tumor is to be designated as a cavernous lymphangioma of the orbit He then quotes Forster's case. The mode of development of these tumors They must belong to the class of new formations which take their origin from embryonal tissue . This follows from some unknown cause

We must assume, in the foregoing cases, that in the orbital tissue at some point, the development starts from (the lymph vessels have not as yet been demonstrated) the germ of the mesoderm or embryonal formative cells In such a new growth all such tissues may be found which are destined to be developed from the mesoderm That in any special case any particular type should predominate is not to be wondered at In one case it assumed the character of a cavernous lymphangioma, which is rich in connective tissue, has many hollow spaces filled with lymphoid cells The formation of blood vessels keeps pace with the formation of connective tissue, which they nourish In a later stage muscular fibers develop The formative material, however, has been present from the beginning, consisting undoubtedly of a portion of the spindle cells interspersed in between the connective tissue framework The arrangement of the muscular fibers is so far regular, in that they arrange themselves in bundles, otherwise, they follow no regular type The pressure which results from the growth of the tumor explains the inflamed condition of the vessels of the fibrous capsule, which appear to have developed from the cellular tissue of the orbit The inflamed condition of the capsule is demonstrated by the hypertrophied condition of its capsule The hollow spaces within the tumor are of very irregular form This is the result of the outgrowth of processes, which meeting each other from opposite sides lead to the formation of new spaces, and this going on will gradually lead to increase of the tumor

This tumor must be differentiated from the cavernous angioma, and in so doing I must confine myself to a clinical differential diagnosis

The cavernous lymphangioma has no characteristic clinical picture, so that we can show but indirectly by the clinical history that they are not cavernous angioma Based on a case of v Graefe (*Graefe-Saemisch,* vol vi, p 708) Berlin describes the principal clinical features of the cavernous angioma 'The spontaneous increase and diminution of the swelling, which can also be induced mechanically Its full, elastic, but at no point hard consistence, the almost totally intact muscular movements, its seat in fatty tissue, its extremely slow development, its painlessness and lastly the otherwise good condition of the patient "

Not a single one of the symptoms was present in this case (as also in Forster's case) The increase and diminution of the swelling was entirely wanting Forster's case showed exophthalmus, nor was the consistence like that described by v Graefe It was hard, which could not be the case in a tumor that was changing its size and elastic Still it was very difficult to form a correct idea as to the consistence of a tumor, especially when palpating a tumor in the orbit Then again, there was not in our case a totally intact muscular condition, for we found impairment of the external rectus In Forster's case, in which the tumor was inside the muscular funnel, the movement was interfered with in all directions If this last symptom were always found lacking in cavernous angiome, and in both the other cases was found present, this could be explained by the different anatomic character of the tumors For the angiome is compressible, hence, any interference with muscular movements can be easily overcome, whereas in the lymphangiome this can not occur, hence the interference with the muscular action The seat of the disease, the painlessness and general condition of the patient are general symptoms and do not enter into the differential diagnosis

The other objection which Berlin makes to Forster's case I do not consider as proved The fact that this is an isolated case simply goes to prove that it is a rare affection and it is possible that some of the cases which have been described as fibroma of the orbit were of this nature It seems strange that Berlin is not satisfied with the statement that "the spaces were filled with lymphoid cells and contained no other morphologic elements," and again his remarks about the preserving value of Muller's fluid. Examination of specimens which had been preserved for many years in Muller's fluid demonstrated the fact that it does preserve the red blood corpuscles beautifully

Berlin seems to be of opinion that lymphangioma can only occur where lymph vessels are present I here once more point to the mode of development of these tumors, and will further add Wegner's theory. (*Langenbeck Arch* xx) Wegner arrives at the following conclusions

1 Lymphangioma may develop from already existing lymph vessels, which become dilated as a result of stasis, owing to closure of larger lymph vessels, hence, as a result of ectasie with hyperplasia A case of this kind of so-called capillary lymphangioma has been described by Ben Israel (*Uber Lymphangioma Mag Dis Würzburg,* 1885)

2 A second mode of development is not from preexisting lymph vessels, but from newly formed lymph vessels, which are the result of an active proliferation of endothelium which already exists—homoplastic neoplasm

3 A third form is mentioned by Wegner, in which there is also a new formation of lymph vessels, which develop from connective tissue, granulation tissue. which is the result of the dilatation of spaces gradually taking on the character of lymph-carrying spaces—heteroplastic neoplasm

14 E 7th Street

ECTOPIA LENTIS

Read in the Section on Ophthalmology, at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md May 7-10 1895

BY FLAVEL B TIFFANY, M D
KANSAS CITY, MO

In speaking of the subject of ectopia lentis before this body of oculists, it is not my purpose to review the literature upon the subject nor to discuss in particular the symptoms or treatment Each and every one of you doubtless has met with the various forms of ectopia lentis—spontaneous, traumatic and congenital In my practice within the last twenty years I have seen almost every form of luxation of the crystalline lens I have seen the lens as it were a drop of oil in the anterior chamber, I have seen it extruded through the sclera lying beneath the conjunctiva, I have also seen it entirely expelled from the eye through the cornea Only a few days ago when attempting to evert the lid of a baby with ophthalmia neonatorum, the lens popped out on the cheek through the ulcerated staphylomatous cornea I have found the lens partially dislocated from its bed, swinging backward and forward like a shutter on its hinges Quite frequently have I found it luxated into the vitreous and floating there I remember one case in particular, where the lens had been broken and thrust into the anterior chamber by an osage orange thorn, and the attending surgeon was about to remove the eye, mistaking the comminuted lens in the chamber for panophthalmitis

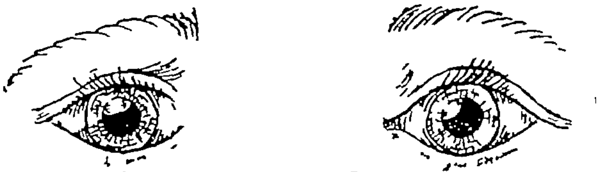
I call to mind several cases of luxation of the lens into the anterior chamber, which for want of proper diagnosis and timely treatment had provoked suppurative iritis and glaucoma Several cases I have had of so called spontaneous luxation into the vitreous, but invariably they were in myopic eyes or cases of synchisis, but all these you have also had, and it is not of them I wish to speak I want to call your attention especially, gentlemen, to two cases which are in my opinion rare or unique The first is that of traumatic luxation of both lenses at one and the same time in an individual whom I saw at Edgar Brown's clinic at Liverpool, Eng, September, 1887 The patient was a woman of middle age On each eye the lens was seen resting upon the sclera beneath the conjunctiva a few mm from the inner and upper border of the limbus There was a rupture of the sclera about 8 mm long between the superior and internal rectus, parallel with the limbus, and some 3 or 4 mm from the sclero corneal junction The injury was caused by a clutch of the fist during an altercation between the woman and her son in law I speak of this as a most rare accident, both eyes having been identically and simultaneously injured But it is to my second case I especially call your attention This case is that of congenital ectopia lentis in a family of nine children, the Vogle family of Leavenworth, Kan, seven of whom were thus afflicted, while the other two had not the slightest displacement of the lens In each of the seven, the lens of each eye was displaced in some direction from one third to one half or more of its width With the pupils dilated, one could readily view the fundus of the eye, either through or at one side of the lens With the indirect method, two images of the fundus could be seen at one and the same time The lenses all seemed slightly opaque, and the edges were all dark, appearing as a black curved line dividing the pupil, this line probably was due to the total reflection and not to opacity In each case there was iridodonesis and the lens could be seen swaying slightly to and fro None of the children complained of or admitted of having monocular diplopia

Of the seven afflicted, there were three girls and four boys, ranging from 4 to 19 years I made a careful examination of both eyes of each child, taking the vision with and without glasses, making a drawing of each eye, illustrating the direction of the luxation and amount I have had a half tone made of these drawings which I hand you They will show better than words can tell, the appearance of each case examined In most of the cases you will notice that the displacement is outward, in some slightly upward and outward, in one alone the lens of both eyes is displaced toward the nasal side

JOSEPHINE AGE 19

WILLIAM AGE 12

HERMAN AGE 4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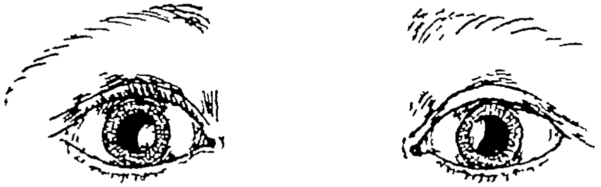
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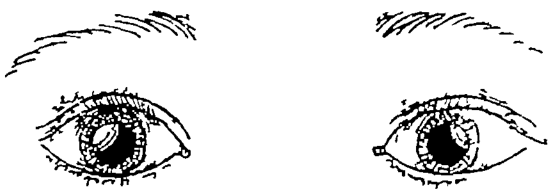
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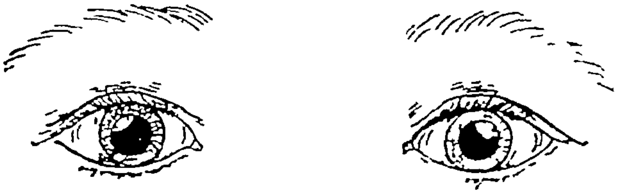

THEODORE AGE 8

In No 1, the oldest, Josephine, vision without glasses was 20 200 Glasses gave but little improvement

No 2, Minnie, aged 16, V R E =20 200 V L E =20-200 with + 3 50 vision was increased to 20-60 For reading she required +12 Pupillary distance was 60 mm

No 3, Emma, age 15, V R E = 5 200, V L E = 8-200, +11 D s gave best vision

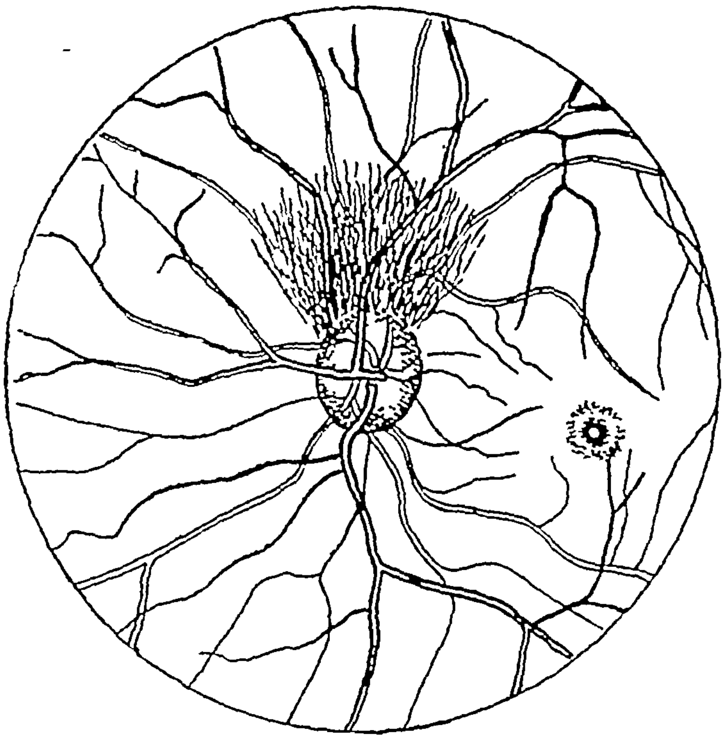
No 4, Willie, age 12, V R E =8 160, V L E = 6-160, +11 gave best vision

No 5, Freddie, age 10, V R E = 12 160, V L E = 12-160, Gave + 13, P D, 60 mm

No 6, Theodore, age 8, V R E = 3-200, V L E = 3-200, + 11 gave best results

No 7, Herman, age 4, vision as near as I could tell was about 8-200 of either eye

As the diagram indicates, you will see that in the case of Josephine, the lenses were displaced horizontally outward In the case of Emma, the lens of the right eye was vertically upward, while that of the left eye was upward and inward In Theodore, both lenses were displaced upward and outward In Freddie, both lenses were shoved inward, toward the nose This is the only one with displacement inward of both eyes In the case of Minnie, the lens of the right eye is displaced upward and outward, while that of the left is more nearly horizontally outward In the case of William, the right lens is horizontally outward and the left is upward and outward In the youngest child Herman, age 4, there is but slight displacement and that is outward and upward in either eye He seems to have the least amount of vision of any The other two children—Louisa, age 18, and Bertha, age 6, who are not in the group had 20 20 of either eye, but under the mydriatic it was revealed that they were hyperopic each to the amount of 3 D Louisa had the medullary sheath or gray fibers of the optic nerve showing in the left eye



Louisa, age 18

The mother of these children is 40 years old, and examination showed nearly a normal eye or a very slight amount of hyperopia The father is dead, but the wife testified to having noticed that her husband had something shaking in his eyes and that he was very near sighted He was a tailor and worked constantly at the bench up to his death without glasses The shaking in the eye she noticed was probably a tremulous iris and from this fact and that he was myopic we may naturally conclude that he was afflicted with ectopia lentis The father was Swiss and the mother German and they were no blood relation

Now the question that interests me especially, in this group, is the etiology, and also why seven out of nine should inherit the anomaly and two should go free, and why all but one should have the displacement outward You may say that it is due to an arrest of development, then we naturally inquire of what part of the eye, not of the lens, for certainly in these cases the lenses were of the natural size and shape If you say that coloboma of the iris or of the retina is due to an arrest of development, or that cleft palate or bifurcated uvula are due to an incomplete union, I can more easily understand that, they being at the median line It seems to me that these cases are of special interest from an etiologic stand point and again from the fact that so large a number of the same family are afflicted And were we to explain the etiology, what may we say of the distinction why were most of these children doomed while two escaped?

TREATMENT

In the primary infinitesimal amount of protoplasm from which the body is evolved, there are inherent all the potential elements that may go to form the perfect being in all its minutiæ, but if these potential elements are vitiated by abuse, by profligacy, by dissipation, by debauchery, or by excesses and intemperance in any direction the impress in some way is most sure to be visited on the prenatal child These freaks and anomalies are, then, the direct consequences of the violation in some way of the great laws of nature and whereas it is not in our power to reintegrate the present, we should ever be on the alert by judicious and timely advice, to exert our influence in protecting future generations against vitiated inheritancy, that they may not be dwarfed or crippled in their physical or mental development

1235 Grand Avenue

ENCHONDROMA OF THE CARTILAGE, UPPER LID

Read in the Section on Ophthalmology, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore, Md, May 7-10, 1895

BY PETER D KEYSER, M D
PHILADELPHIA PA

In 1888 Mrs P, age 58, presented herself at my clinic at the Wills Eye Hospital with a round lump in the upper lid, which she said had been slowly growing for a year or two No inflammation connected therewith It was hard, solid and firmly attached to the cartilage An incision was made along the lid over the tumor and the convexity of the latter shaved off This was firm, cartilaginous, cutting crisply and of a yellowish white appearance It had all the appearance of a thickened cartilage No microscopic examination was made of the part removed

In 1890 she came back with a much larger return of the growth It was again operated on as in the former method No examination made In 1892 it had grown again and more nodular My purpose now was to try to remove all of the diseased cartilage, leaving if possible the conjunctiva, so as to protect the cornea To do this the edge of the lid was carefully slit up, and as much as could be of the cartilage down to the conjunctiva removed This seemed to do very well for awhile, but after six or eight months it began to develop again quite rapidly, growing along the whole cartilage, taking upon itself a well developed nodular form, and with a small open sore on the edge of the lid, the whole having the appearance as in the accompanying figure

Operative influence was again necessary to remove the unsightly looking lid and to relieve distress, so, on Sept 11, 1894, the edge of the lid was carefully slit and the skin dissected up so as to expose the whole growth The whole cartilage of the nodule on the nasal side was removed with the conjunctiva, while that of the temporal side was dissected out as much as possible, leaving the conjunctiva

After the operation Dr Currie, chief resident surgeon and acting curator of the hospital preserved what was removed, for preparation and microscopic examination After some time he presented me with some carefully prepared slides and called my attention to a number of cells such as are exhibited in enchondroma After very careful examination it was decided that the growth was enchondromatous formation, and as it was a simple outgrowth from the normal cartilage, might come under Virchow's term of ecchondroses

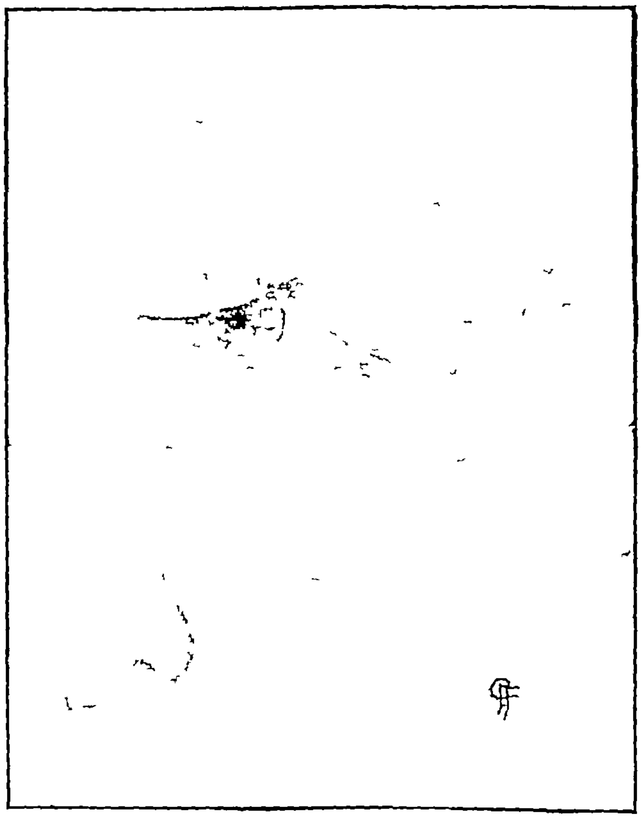


Figure 1

Dr Clarence P Franklin was kind enough to make a drawing of the eye just previous to the operation (Fig 1) and also to make the accompanying sketches from the slides under the microscope, showing the fibrous and cartilaginous nature of the specimen There were well developed walls with the cartilaginous cells lying therein, some separated, while in others they are packed closely together There is also glandular tissue See accompanying drawings

The character of growth in this place seemed somewhat strange and to me new, and search has been made in all the works on ophthalmology in my library to find if such a growth in that part has been noted An examination of all the text books on ophthalmology published in English, German and French, so far has failed to find any report of such a growth except in Fuchs In the chapter on the tumors of the lids he writes "In consideration of the complicated structure of the lid, in which such a manifold variety of tissues take part, it should not surprise us that the most dissimilar kinds of tissue should at times come under observation As rare occurrences there have been observed fibromata, enchondromata, etc , of the sebaceous glands (including Meibomian glands and the glands of Krause) of the sweat glands and the glands of Moll "

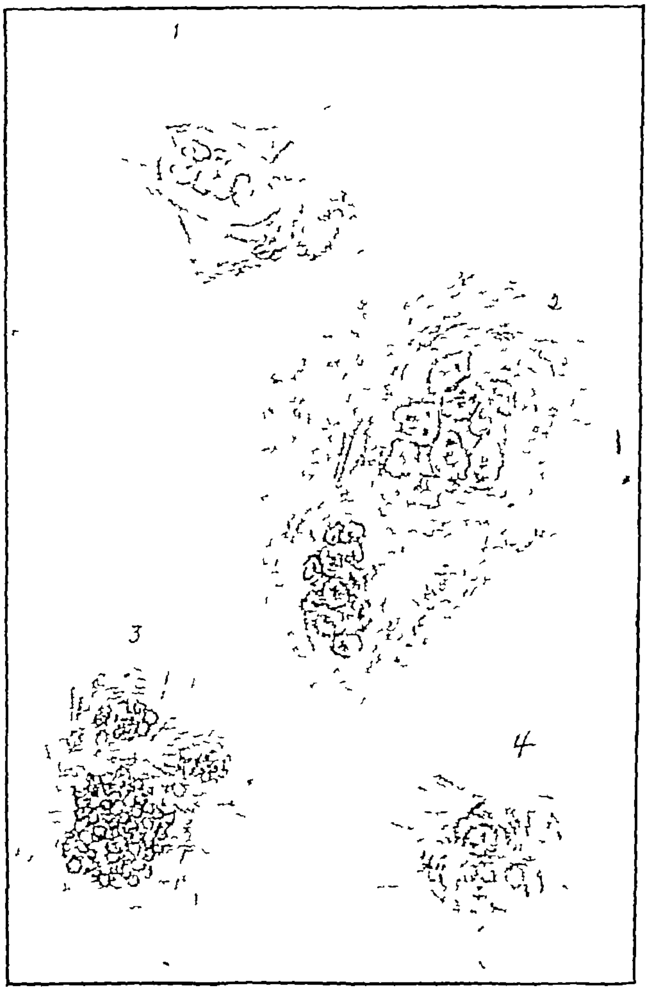


Figure 2

Search has been made in all of the German, French and English ophthalmological journals from their beginning, and no case found reported The *Jahres Bericht*, "*uber die leistungen und fortschritte im Gebiete der Ophthalmologie* of Nagel, and the *Index Medicus* have been looked through and no case reported

Fuchs is the only one so far found, calling attention to the fact of such a growth taking place on the lid I present the case as one of very rare occurrence

Figure 3

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NOTE —Dr de Schweinitz writes me that the following in his text book escaped my notice "Rare forms of benign tumors are adenoma of the sweat glands and their follicles, papilloma of the ciliary border and enchondroma *of the tarsus*" He also says, *that his information on the* subject was derived from Fuchs, who appears to be the only one reporting such a case, and Panas also refers to the same, evidently derived from Fuchs"

FORMALIN AS A PRESERVATIVE AGENT FOR EYE SPECIMENS

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the *American Medical Association, at* Baltimore, Md, May 7-10 1895

BY WILLIAM H WILDER, M D

CHICAGO

The use of some of the older hardening and preservative agents especially for eye specimens is accompanied with certain disadvantages

Chromic acid and its salts, as used in Muller's fluid, although eminently satisfactory for hardening certain specimens, such as those containing nerve tissue, so *discolors them* that beautiful macroscopic preparations are difficult to obtain from its use Alcohol and methyl-alcohol, although not discoloring the tissues of the eye, are open to the objection of making the cornea opaque, abstracting the color from the iris, blood vessels, etc, and what is more serious, unless cautiously used, of causing such contraction of the tissues as to almost spoil some delicate specimens Again, Muller's fluid and the alcohols require a considerable time to completely harden the tissues of the eyeball so that it can be satisfactorily mounted These objections do not pertain to *formalin, which is one* of the most valuable preservative agents we have

Formal or formalin is an aqueous solution of formaldehyde, the latter in its original state being a gas resulting from the oxidation of methyl-alcohol As obtained in the market this solution is a colorless, neutral liquid with a specific gravity of 1 080 to 1 088, having a pungent penetrating odor and containing 40 per cent of formaldehyde It is miscible in all proportions with water, so that solutions of different strengths can be readily made

The specimens exhibited here were hardened in a 5 per cent solution, made by using one part of formalin (Schering) and eight parts of water

This strength has seemed to me the most useful, although a weaker solution may be used also with success Hermann, of Erlangen, (*Anatom Anzeiger*, Dec *11, 1893) found that* he could completely harden an organ as large as a calf's heart in a 1 per cent solution in twenty-four hours

N W Alleger, of Washington (*American Monthly Mic J* 1894, xv) is reported as preferring a 10 per cent solution as a hardening agent It seemed to me that some of my specimens hardened in a solution as strong as this, did not preserve the natural colors (particularly *the blood* in *the vessels*) as did those in the weaker solution

The method of procedure is, in brief, as follows after washing the blood from the enucleated eye with ordinary water, it is placed at once in a bottle containing two or three ounces of the 5 per cent solution, where it remains for a few days It will then be found hard enough to bisect In case the eyeball is filled with a tumor or a mass of exudate, it can be cut with a thin razor almost as easily as one would cut an apple, but if the vitreous is present either in the normal or fluid condition it is best to freeze it, so that in cutting, the relation of the delicate internal structures may not be disturbed and the lens dislocated

The part that is to be preserved entire, after thawing in tepid water, if it has been previously frozen, is then placed for twenty-four hours in a 33⅓ per cent solution of glycerin and water, and then for an equal length of time in a 50 per cent glycerin water solution It is then ready for mounting in glycerin jelly after the method of Priestley Smith described in the *Ophthalmic Review*, 1884

This glycerin jelly begins to soften at about 120 degrees Fah, but the formalin may be again used to solidify the gelatin and to make the preparation permanent Before capping and hermetically sealing the cells, they may be placed under a bell jar with a little cup containing a small quantity of the formalin The vapor of formaldehyde that is given off, fixes or hardens the jelly so that it can not be softened by boiling in water or even a soda solution I commonly leave my specimens exposed to this vapor for about twenty-four hours, and then seal by cementing on the cover

Hauser, of Erlangen (*London Therapist*, Aug 15 and Sept 15, 1893), makes use of the formalin vapor for solidifying the gelatin on which colonies of bacteria are growing, thus making permanent preparations of cultures for demonstration

It will be seen in the specimens that the cornea and lens retain almost their normal transparency, at least enough to enable one to note the color of the iris and the whitish pupillary reflex present in glioma The injection of the ciliary vessels is also well demonstrated in some specimens, while the retinal vessels may be fairly well traced even to small branches The tissues preserve their natural color and are not shrunken The retina retains its position better than after hardening with alcohol or Müller's fluid, although in some preparations it will be seen slightly wrinkled

For microscopic work it presents little or no advantage Specimens that are to be embedded in celloidin must go through alcohol after leaving the formalin solution, but the appearance of the cell structures shows that the formalin acts as an excellent fixing agent

Marcus (*Neurolog Centralbl*, 1895, xiv, 4) recommends highly the use of formalin for hardening specimens of the central nervous system, and claims that the results he obtained with the Weigert Pal method of staining nervous tissue hardened in this way were much superior to those of the old methods Whatever its value as an antiseptic or therapeutic agent, it must be conceded that as a medium for preserving and hardening anatomic and pathologic specimens it has not its equal

103 State Street

SOME POINTS REGARDING THE ETIOLOGY AND TREATMENT OF POST-NASAL CATARRH, WITH REMARKS ON THE HYGIENE OF THE RESPIRATORY ORGANS

Read in the Section on Laryngology and Otology at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore, Md , May 7 10, 1895

BY W FREUDENTHAL, M.D

CONSULTING LARYNGOLOGIST TO BETH ISRAEL HOSPITAL VISITING LARYNGOLOGIST TO ST MARK'S HOSPITAL, THE MONTIFIORE HOME, AND THE GERMAN POLIKLINIK, ETC
NEW YORK

There exists for whole nations as well as for the single individual, health and disease, life and death Both are never in perfectly normal conditions of their organic being, in both, out of *small* and *persistent* working noxious influences, lasting dispositions and stationary diseases are developed, which affect here single organs or systems and there a great many or the majority of a nation

And just as certain as deeper causes finally influence the whole body of the individual, making him a sickly type, so the noxious agents affecting a whole people can stamp upon it a more or less distinguishable type of peculiarity and susceptibility to sickness or infirmity (Geigel)

There are some noxious causes which the writer believes prevail more in this country than elsewhere The disease, which we shall discuss in this paper, is post nasal catarrh with all its sequelæ This disease is so frequent in this country that when European authors speak of American catarrh, they mean this affection In this country it is usually spoken of simply as catarrh Now it is the intention of this paper to show that post-nasal catarrh is not such a simple thing as is often believed, and that its causes and effects are to be sought in conditions in which we did not look for them before

The naso pharynx is a cul de sac between the nose and the pharynx, and this situation alone ought to be sufficient proof that it belongs to or is a part of the respiratory, as well as of the alimentary tract Not only because its mucous membrane is lined with columnar ciliated epithelium as the whole respiratory tract, does it belong to this part, but also, *and this is the most important reason*, because it impregnates—I do not say saturates—the inspired air with humidity

That "in the ordinary process of deglutition," as Bosworth says, "it is absolutely necessary that the lower pharynx should be thoroughly lubricated by mucus, in order that the bolus of food shall pass over it without hindrance," and that this mucus comes from the glands of the vault of the pharynx, is, I think, generally accepted

But these glands have in my opinion, another task to fulfill Just as it is difficult to get a bolus down into the esophagus and stomach, when it is not lubricated, just the same difficulty is experienced by inhaling air into the lungs that had not been previously moistened in the upper air passages This moistening process is to a great extent accomplished in the naso-pharynx Yes, I am inclined to assert that the major part of this process takes place in that portion of the respiratory tract

I formed this opinion after repeating the experiments made by Aschenbrandt[1] Already in 1886, Aschenbrandt showed the importance which the nose played in warming as well as moistening the inhaled air As these experiments are of importance for our further investigations, I will mention them briefly here

Aschenbrandt took a U-shaped glass tube which he partly filled with pumice stone and sulphuric acid (See Fig 1) This tube he connected on one side with a straight tube, r^1, which he placed air tight in one nostril The other end of the tube was connected by means of rubber tubing with a glass jar

This jar contained 5 liters of water and was arranged so that in thirty seconds the entire water could flow out Now if we open the clamp at *h*, the water flows out and 5 liters of air will be drawn in through the nose in the following manner through—we will say—the right nostril into the naso-pharynx, into the left nostril, and from there through the glass tube T, to the U-tube, and into the big jar

In the nose and naso-pharynx the air is saturated with moisture, which again is absorbed by the pumice stone and the sulphuric acid in the U-tube, a fact of which we can convince ourselves by touching this glass, which gets warm as soon as the air circulates through it The big jar containing 5 liters=5 000 ccm , is emptied in thirty seconds, i e , corresponding to ten respirations of 500 ccm each

In making this experiment it is better to put a second glass tube *r* into the other open nostril, in order to prevent the strong current of air from closing the nostril Now if we first let the air alone pass through the U-tube and weigh it, and then connect the apparatus with the nose and weigh it again, we can easily determine to what degree the air is saturated with moisture each time

Aschenbrandt and later my friend Richard Kayser,[2] of Breslau, claimed on the ground of these experiments that the air becomes thoroughly saturated with moisture in the nose, while E Bloch,[3] of Freiburg, asserts that the saturation is not complete I have made a great many experiments in the chemic laboratory of Dr H Schweitzer and came to the conclusion that neither is right, but that the truth lies between the two

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[1] Die Bedeutung der Nase für die Athmung Würzburg 18[illegible]

[2] Die Bedeutung der Nase etc für die Respiration Pflüger's Archiv 1887 page 127 and ibidem 1890

It seems to me that in even apparently normal noses the ability of the mucous glands to give off moisture to the atmosphere varies in different persons and at different times In the majority of cases, my results corresponded very closely or were similar to those of Aschenbrandt and Kayser, while, on the other hand, there were quite a number of apparently just as normal noses, where the gain in weight gave evidence that the inspired air was surely not fully saturated with humidity

A few examples may serve as illustrations Dr L, assistant in the laboratory of Dr Schweitzer, has, as far as I could see by an examination in the laboratory, a normal nose The U-tube weighed before the experiment, 26 4907 grams, after 5 liters of air had passed through the nose, the tube weighed 26 6115 grams, showing an increase of weight of 1219 grams

This volume of air passed through in thirty seconds In one minute we would have

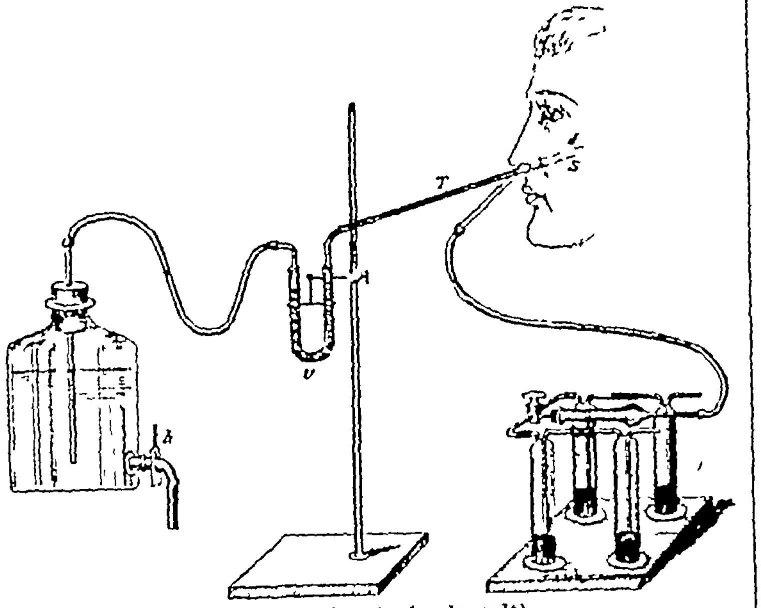

Fig 1—(After Aschenbrandt)

	0 1219
	x 2
	0 2438
In an hour	x 60
	14 6280
In twenty-four hours	x 24
	351 0720

The relative humidity of the air was 48 per cent, and the sum of 351 grams per day would not be in favor of Aschenbrandt's theory, while the next case of a 15-year-old office boy, also with a normal nose, gave the following results

The tube before the experiment weighed 26 6428 after the experiment it weighed 26 8028 grams Therefore increase in thirty seconds, 1600 grams Therefore increase in twenty-four hours, 460 8 grams

The temperature of the room was 68 degrees F, and the relative humidity 48 per cent If I add the humidity which the air gives off in the rubber tube, we would have approximately 500 grams per day, or about the amount necessary to a perfect saturation. These are a few examples taken from a large number of cases that I have experimented upon, but they suffice to illustrate the results

I will now add my modifications, which are twofold first, I examined a number (although not a large one) of pathologic cases, which to my knowledge has not been done heretofore In almost all of these cases I found a diminution of the moisture for the inhaled air, but I will say that here is a large field for further investigations I shall limit myself to a few examples only

Case 1—H S, was galvano-cauterized in his nose repeatedly and is well since Temperature *of the room* 69 degrees F, relative humidity, 48 per cent The U-tube before the experiment weighed 26 455 grams, after the experiment it weighed 26 513 grams Increase in weight in thirty seconds *only*, 058 *grams*, *increase in weight in* 24 hours, 167 04 grams.

We observe at once the immense difference *in this man*, who had been cauterized about four years ago The mucous membrane in his nose was so destroyed that during one day he gave off only 167 grams of water instead of 500 grams

Case 2—Dr S S, has been suffering from hay fever for eight years, but last year he was in Germany and was free from it Temperature of the room 69 degrees F, humidity 48 per cent Weight of the U-tube before the experiment, 27 0055 grams, after the experiment, 27 1095 Increase in thirty seconds, 1040 grams, increase in twenty-four hours, 299 52 grams

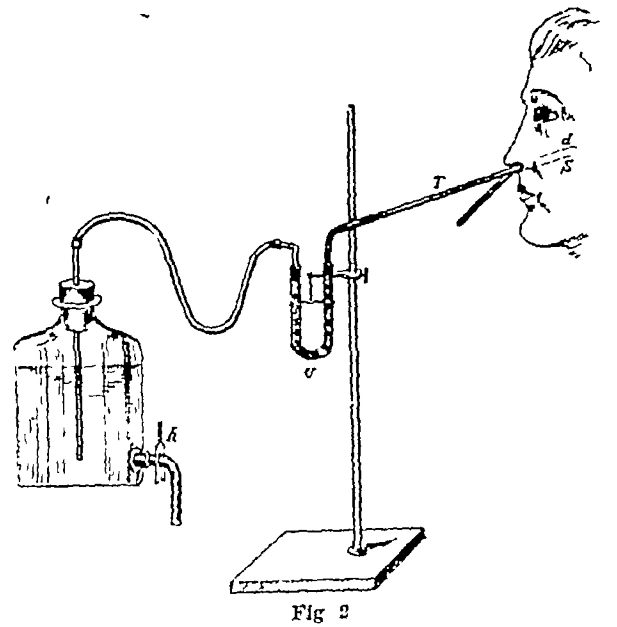

Fig 2

Case 3—Office boy with large adenoid vegetations The temperature of the room and relative humidity the same as above U-tube before the experiment, 26 435 grams, after the experiment, 26 455 grams Increase in thirty seconds, 0 20 grams, increase in twenty-four hours, 57 6 grams

This boy, therefore only gave off about one-ninth part of the normal amount, *i e*, 57 6 grams per day instead of 500 I must state, however, that the obstruction in his retro pharynx was so great that the air could be drawn through the nose only very slowly, and that at the end of thirty seconds only 2 liters of water had flown out of the jar, instead of the usual 5 liters The lymphoid tissue was removed, and a few weeks later the experiment repeated The numbers were quite different

The weight of the U-tube before the experiment was 23 1170 grams, the weight after the experiment, 23 2570 grams Therefore the increase in thirty seconds was 1400 grams, the increase in twenty-four hours, 342 72 grams

The reason why we did not now get the full amount of about 500 grams per day, lies in the fact that very likely the glands in the retro pharynx had not as yet regained their physiologic secretory power

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[3] Untersuchungen zur Physiologie der Nasenathmung Ztschr f Ohrenheilkunde, 1888, page 215

I could not get a patient with rhinitis sicca to come down town as far as Front Street, where the experiments in the laboratory of Dr Schweitzer had been made, but from the first case of H S, whose nasal mucosa had undergone partial destruction, we can imagine the result in this disease To get very exact numbers I have used in the beginning two U-tubes, which were connected with each other But this increase in weight of the second tube after 5 liters of air had passed it, varied only from 0003 to 001 grams I therefore did not consider it of much importance and used only one U tube afterward

Another series of experiments which I made, consisted in letting *absolutely dry air* pass through the nose For this purpose, I connected the one nostril as before with the U-tube and the jar of water, and the other nostril with Liebig's apparatus, as shown in Fig 2 This apparatus makes the air perfectly dry and free from carbonic acid The results obtained by this method showed the increase in weight of the U-tube to be almost identical with the former ones, consequently the nose gave off in these experiments much more humidity than in the former In other words the nose had not only to bring up this absolutely dry air to the humidity of the air of the room (43–60 per cent relative humidity) which was used in the former experiments, but, in addition, it saturated the air with humidity to the same extent as when the air of the room was used The giving off of water *therefore from the nose was much greater* The bearing of this condition in relation to our subject will be discussed later on

As interesting as all these experiments were, so much did the idea strike me that they were only, to a certain degree, applicable to the physiologic respiration of the healthy man First, the air that we inhale, passes through only one nostril Therefore, if the volume of air be driven through both nostrils, it must gain a proportionate quantity of moisture from going over a larger surface of the respiratory tract Consequently, a part of the moisture gained by driving the air through both nostrils must be deducted in our experiments, hence the Aschenbrandt-Kayser theory that the air in passing through the nose is saturated completely with moisture is not perfectly correct Another reason for this is, that the air is never driven or sucked through the nose with such force as in our experiments In the normal quiet respiration the air goes through the nose, only slightly touching the septum and the turbinated bodies and thus striking the wall of the retro-pharynx, creates a whirling motion which brings the different particles of air repeatedly in contact with the mucosa This causes a longer delay of the air in the retro-pharynx than in any other part of the upper air passages, and in consequence thereof we must expect that the glands here have more chance to give off moisture than elsewhere in the upper respiratory tract Another fact in favor of my theory is the boy with the hypertrophied lymphoid tissue at the vault of his pharynx At the first experiment the air had to remain a long time in the nostrils, on account of the obstruction in the retro pharynx But, nevertheless, the air that passed through was by no means saturated with humidity The gain in weight of the U-tube was, on the contrary, so small that a saturation of the air could not be spoken of After the removal of the lymphoid tissue, when the air could freely pass through the retro-pharynx, the gain in humidity was so much that it almost reached the normal condition Thus we have to attribute a great deal of the work done in saturating the air to the retro pharynx

Now what are the reasons that prevent the retro-pharynx from performing this function? Of the many reasons which might come into consideration, allow me to discuss only two, which I consider of the greatest importance, and which to my knowledge have not been hitherto discussed in this connection The first is the manner in which the houses in New York and other large cities of the United States as far as I know them, are heated in winter, and the second are the so called colds

There are three different ways of *heating* a whole house from one source the first is hot water heating This is of the least importance to us, as it is used comparatively little in this country, although advantages are claimed for it by some reliable firms here and in Boston Scientific investigations, however, of this method regarding our purposes have not been made

The second way of heating houses is by means of steam This has great disadvantages, which most of you have undoubtedly noticed to your own discomfort As a rule, I find that houses and flats heated by this method, are entirely too hot It is nothing uncommon to find a temperature of 80 degrees F, especially where there are small children The people, often very intelligent, think their little ones need much warmer rooms than grown people, and are confirmed in this obnoxious idea by physicians who do not know better Undoubtedly it is difficult to regulate the steam heat according to one's wishes In this connection, Dr John S Billings in his excellent book on 'The Principles of Ventilation and Heating" (New York, 1884) says "The only way to diminish the heat is, to either close the register which cuts off the supply of fresh air, or to turn off the steam from the radiator, which will give an insufficient supply of heat The result is, that the great majority of steam-heated rooms are, during many days in the year too hot, and at the same time have an insufficient supply of fresh air, producing much the same kind of discomfort as an ordinary *hot-air furnace*, although somewhat less in degree"

Whether this last statement is really correct, we will discuss immediately, as we are now coming *to the third and most important* method of heating the hot-air furnace You are all familiar with this method of heating The shaft which conveys the so called fresh air to the furnace, is situated near the ground and usually in close proximity to the kitchen This shaft is so poorly constructed ninety-nine times out of a hundred, that the bad air in the cellar has free access to it The air from these sources is heated in the furnace, and passes into the rooms This impure air of the cellar is warmed, that means it is deprived of the greatest part of its humidity, if not of all of it In this condition of dryness it reaches the rooms wherein we live There it has the effect of drying the already present air and it is evident that the colder the atmosphere is outside and the more we heat our furnace, the dryer will the air become in our rooms Now it has been shown by various experiments that the atmosphere of a room in winter should be kept moderately humid, *i e* it should contain between 50 and 60 per cent relative humidity The lowest point should never go down below 40 per cent while we still feel pleasant at a relative humidity of 70 per cent , even 75 or 80 per cent are not considered unhealthy

Now gentlemen I have tested it quite often during the last two winters, and I have never seen a relative humidity of 50 per cent in New York houses When the outside temperature was about 30 degrees F , I have never seen even 40 per cent! The highest point reached was 30 per cent , but 25, 20, even 18 per cent relative humidity, was nothing unusual when the weather was very cold and when this lasted for any length of time, so that the rooms were not at all or very little aired

Casimir Wurster, who studied these conditions in New York also, found that sometimes in private dwellings, hotels or theaters the relative humidity goes down as low as 10 per cent I made such investigations systematically during the winter of 1893-1894 in different hospitals of this city I give you below, the data found at the Montefiore Home for chronic invalids, a hospital which is located hygienically better than most hospitals in this city, and where I found the highest percentage of humidity Of course I took into consideration that these investigations were made at a time when the weather was already milder and the windows and doors could be opened Although as I said, the results were the best obtained, you will see by looking over the tables, that even in this hospital the relative humidity seldom reached 40 per cent , i e , the lowest amount necessary for our comfort Generally it was below this point, *ergo*, detrimental to the inmates Here are the data which Dr Fraenkel, the house physician of the home had the kindness to assist in procuring

Ward F Room No 1 Eight Beds 1894

Date	Time	Temperature		Relative Humidity	Remarks
		Out door	In door		
Mar 11,	8 a m	53°	65°	41%	
	12 m	54	65	45	Window open
	4 p m	58	67½	45	Window open
	8 p m	56	68	44	Window open
Mar 12,	8 a m	54	65	36½	
	12 m	59	61	35	Window open
	4 p m	60	63	39	Window open
	8 p m	62	61	29	
Ward B Room No 1 Two Beds					
Mar 14,	8 a m	54	61½	26	Window open
	12 m	50	60	28	Window open
	4 p m	48	61	27	Window open
	8 p m	50	78	22	
Mar 15,	8 a m	46	68½	21	
	12 m	50	71½	25	
	4 p m	48	72½	28	

Data Sheet No 2 Ward B Two Beds

Date	Time	Temperature		Relative Humidity	Remarks
		Out door	In door		
Mar 16,	8 a m	46°	68½°	34%	
	12 m	50	70	32½	Door open
	8 p m	59	71	31	Door open
Smoking Room					
Mar 14,	8 a m	50	79½	26½	
	12 m	54	59	24	Window open
	8 p m	50	78	22	
Mar 15,	12 m	50	71½	20	
	4 p m	48	76	22	
	8 a m	46	69	19	
Mar 16,	8 a m	46	78½	29½	Door open
	12 m	50	76	25	
	8 p m	59	78	23½	
Ward A Room No 5 Eight Beds					
Mar 10,	8 a m	52	65	40½	Window open
	12 m	53	64	37½	Window open three hours
	4 p m	57	63½	35½	
	8 p m	56	65	34	Window open
Mar 11,	8 a m	53	67	38½	Window open at night
	12 m	54	66½	40	Window open at night
	4 p m	58	67½	42	Window open at night
	8 p m	56	68	40	
Mar 12,	8 a m	54	66	35	Window open evening
	12 m	59	68½	29	Window open evening
	4 p m	60	68½	25	Window open evening
	8 p m	57	67	29	Window open evening
Ward E Room No 1 Eight Beds					
Mar 10,	8 a m	52	62	39	Window open
	12 m	53	63	39	
	4 p m	57	65½	36	Window open
	8 p m	56	63	37	

Data Sheet No 3 Ward C Room No 11 Three Beds

Date	Time	Temperature		Relative Humidity	Remarks
		Out door	In door		
Mar 20,	8 a m	54°	63°	39½%	Door open
	12 m	56	61	38	Door open
	4 p m	58	64	35	Door open
	8 p m	56	65	33	Door open
Mar 21,	8 a m	55	69	37½	Door open
	12 m	58	70	35	Door open
	4 p m	60	68	35½	Window open
	8 p m	56	70	34	Window open
Mar 23,	8 a m	57	70	40	
	12 m	60	68	45	Window open
	8 p m	59	70	30	Window open
Ward G Seven Beds					
Mar 20,	8 a m	54	62	35	
	12 m	56	65	32½	
	8 p m	56	68	31	
Mar 21,	8 a m	55	70	33	
	12 m	58	71	32	
	8 p m	57	70	31½	Door open
Mar 22,	8 a m	57	69	38	Floor scrubbed
	12 m	60	63	57	Floor scrubbed but carelessly wiped up
	8 p m	59	68	27	
Ward A Room No 4 Four Beds					
Mar 24,	8 a m	57	61	30	
	4 p m	58	58½	39	Door open
	8 p m	57	67	39	Door open
Mar 25,	8 a m	53	64	41	Door open
	12 m	56	64	46	Door open
	8 p m	57	60	50	Rain
	8 a m	44	56	34	Rain
	12 m	54	58	33	Rain
	8 p m	55	60	31	Rain

Data Sheet No 4 Ward C Room No 1 Eight Beds

Date	Time	Temperature		Relative Humidity	Remarks
		Out door	In door		
Mar 24,	8 a m	57°	68°	28%	Window open
	4 p m	58	66	30	Window open
	8 p m	57	70	30	Window open
Mar 25,	8 a m	53	64	38	Window open
	12 m	56	66	39	Window open
	8 p m	44	63	41½	Window open, Rain
Mar 26,	8 a m	44	58	88	Window open
	12 m	54	60	35	Window open
	8 p m	55	61	32	Window open
Ward F Room No 9 Four Beds					
Mar 28,	8 a m	40	58	22½	Door open
	12 m	56	67	23	Door open
	8 p m	58	68	22	Door open
Mar 29,	8 a m	50	64	30	Door open
	12 m	53	66	41	Window open Scrubbed
	8 p m	54	73	38	Window open
Mar 30,	8 a m	45	64	22½	Window open
	12 m	57	65	23	Window open
	8 p m	58	67	22	Window open
Ward B Room No 1 Eight Beds					
Mar 28,	8 a m	40	63	25	

	12 m	56	69	25½	Window open
	8 p m	58	70	24	Window open
Mar 29,	8 a m	50	71	29	Window open
	12 m	53	68	45½	Window open Scrubbed
	8 p m	54	70	30	Window open
Mar 30,	8 a m	48	64	25	Window open
	12 m	57	69	33	Window open
	8 p m	58	70	32	Window open

We see from this data, that the relative humidity once went down to 19 degrees in the smoking room where generally more people are together, and that it only exceptionally reached 40 degrees, although the outer temperature was already mild and windows and doors could be kept open often How very detrimental this state of affairs is, will be clearer to you if we compare it with the same conditions in summer In summer a relative humidity of 85, 90, or 95 per cent is nothing uncommon in this neighborhood and this when the temperature reaches 90 to 100 degrees F I must remind you here of the fact, that the higher the temperature of the air, the more water it can absorb, and that for example, 90 degrees relative humidity at 90 degrees F is vastly more than 90 per cent relative humidity at 32 degrees F And now imagine people who lived here through the summer months and inhaled that terribly suffocating moist air, having to breathe in winter an atmosphere which contains hardly any moisture "*Les extrêmes se touchent*" in nature as well as in real life Next to the multi-millionaire, who has so much that he does not know how to consume his interests, goes the poor man whose children are starving for want of bread Next to a summer with more than superfluous moisture, we have to stand a winter with much too little of it After inhaling an air with 90 per cent relative humidity we are forced, through the incompleteness of our furnaces, to inhale day and night, an air with mostly below 30 per cent relative humidity Feb 5, 6 and 7, 1895, when the outer temperature was about zero, the hygrometer in my office sank to 15 per cent

And now comes the important question What influence has this abnormally dry air on the upper respiratory organs in general, and on the retro pharynx especially? In his above cited book, Billings says "The precise influence which either the absolute or the relative amount of moisture in air has upon health is uncertain, for habit enables man to undergo great variations in this respect without marked ill effect" While I agree perfectly with this last sentence, as otherwise we would have no healthy person in New York, I am opposed to his idea that simple dryness of the air is not injurious to health To prove this statement, he cites Fort Yuma, Southern California, where during April, May and June the average temperature day and night is 90 degrees, even 100 degrees F, and no rain falls Yet there is no additional sickness He forgets two things 1, that the people in Fort Yuma, live almost permanently in the open air, which is never stationary, and 2, that in spite of this great heat and lack of rain, the moisture never sinks to 20 or 10 degrees relative humidity When Billings says "A dry air with a uniform temperature makes a healthy climate as in New Mexico," he is perfectly right, but this dryness does not mean 10 to 20 per cent relative humidity, but 50 to 60 per cent

I must say the same about similar ideas of Hermann Reinhard (Dresden)[4] He tells us that travelers feel comfortable in some parts of the desert of Sahara, in spite of a comparatively high temperature, as the "air is very dry" and perspiration can take place But we can conjecture what *he* calls dry air, as he indorses the recommendation of some German and English physicians, as to certain places of Cape Land as health resorts on account of their dryness And in examining this nearer, we find that the average relative humidity here, is for October, 42 per cent, for June 62 per cent and for the year 51 per cent ! I would not hesitate for a moment to recommend such places myself, but you understand the great difference

Of late, very little has been written on this subject of heating, and among those authors on this part of hygiene, who discussed it some years ago there is a great dissension of opinion The majority of them, almost all Germans, are in favor of hot air heating, as I think for want of knowledge regarding the way heating is done in this country So Hermann Fischer (Hanover)[5] considers our hot air heating as the best, and attributes most of its disagreeable effects to uncleanliness A similar view is held by von Fodor (Buda Pesth) who attributes[6] the ill effects mostly to the combustion of small particles of air and the products of distillation, that are developed on the hot surface of the furnace

These arguments in favor of hot air are based chiefly on the fact observed by von Pettenkofer, that in the royal castle in Munich, the air in the rooms, *i e*, after coming from the air tubes, contained more humidity than before If we do not believe in wonders we must accept that there was some sort of humidity developed in the rooms themselves This is the only solution I can offer for this single fact, that is in contrast to all our experience The ideas of H Reinhard are based mostly on theoretical deductions The practical investigations he had made in the Kingdom of Saxony, were done by the teachers who, as a rule, do not understand anything about such things Beside these investigations were continued during one week only, and the influence of wind, outer temperature, etc, is hereby such an important factor and underlies such great accidental changes, that we can not take these investigations as confirmatory

On the other hand, there are men like Wolffhugel, Erismann and Krieger who say that the use of hot air heating is to be deprecated They consider it deleterious and make the dryness of such rooms responsible for the disposition to catarrhs of the upper air passages, croup and diphtheria (sic!) etc

The man whose views come nearest to mine is Theod Deneke[7] It is well known that the air has the capacity of absorbing moisture from bodies which lose it by evaporation As, through evaporation, heat is generated, it takes up the heat also The dry air therefore, has the dual property of drying and cooling To what degree this takes place depends upon the dryness, the temperature of the air, and the rapidity of its motion The dryer, the warmer and the more movable the air is, the more thirsty it will be for humidity Now the absolute quantity of the water given off from the whole body is of no hygienic consequence, as it can be replaced constantly by the supply of fresh water There is a difference, however, with some sensitive parts of the skin and mucosa "It is likely," says Deneke, (loc cit), "that when locally the amount of the water evaporation is much augmented, the supply of the water lost toward the surface can not go on quick enough, and as a consequence of this, pathologic changes of these parts may result The portions of the body thus situated are the superficial mucous membranes, which, on the one hand, are constantly exposed to the external air, and on the other from direct communication with the respiratory passages" This is very rational Epidermis and epithelium also here generally protect against the too rapid drying process, but in spite of this it will happen that a suddenly augmented or continuous evaporation will take more water from the superficial layers than can follow from the deeper portions The consequence will be a drying up of the surface and a loss of the elasticity

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[4] Die relative Feuchtigkeit der Atmosphare und ihre Wirkung auf den Menschen Archiv für Hygiene, 1895 p 183.

[5] Ueber die Vorzüge und Nachtheile der Luftheizungen Deutsche Vierteljahrschrift für offentl Gesundheitspflege Bd XIV [illegible] p [illegible]

[6] Ibidem p 118

[7] Ueber die Bestimmung der Luftfeuchtigkeit zu hygienischen Zwecken Ztschr f Hygiene I, p 4[illegible]

And now we come back to our first experiments and will recognize their importance in this regard We have seen that when we connected the Liebig apparatus with the nose, and allowed the perfectly dry air to pass through, this was saturated with humidity after it had passed through the nose It would naturally make only a slight difference whether the air is perfectly dry, as in the Liebig apparatus, or whether it contains 20 or 30 degrees of humidity, as so often found in our residences The difference is only in degree It is, however, proved that dry air if inhaled will become saturated in the nose and naso-pharynx, that is to say, the dryer the air is we inhale, the more moisture will be given off by the nose and naso-pharynx The work of the nose and naso-pharynx will be so much greater with every particle of air we inhale How long the mucous membrane of these parts will be able to furnish the necessary water supply, will only therefore be a question of time Consequently, we will, sooner or later, reach that point where the mucous membranes of these parts will be dry like a well in summer This will occur, for example, in very cold weather only temporarily in perfectly healthy persons, or permanently as we see it in so many thousands of times in pathologic conditions

Now the manner by which this leads to the development of a post-nasal catarrh is not so simple Supposing we have a person with a normal nasal mucosa If dry air is inhaled for any length of time by this person, to such a degree that no more water can follow from other parts of the body, the erectile tissue will respond to this irritation like any other irritation, with swelling, which will recede as soon as the irritating cause ceases When, however, this has lasted for a longer time, the swelling remains in spite of good hygienic conditions and the result is impeded nose breathing or mouth breathing

Under such conditions the secretion that continually comes from the mucous glands of the naso-pharynx has no work to accomplish The air does not pass the retro-pharynx and the watery discharge dries out while the solid substances, which normally are carried away with respiration and lubrication, stagnate at the retro-pharynx The *secretion* under this drying surface is *less than normal*, as very soon solid masses adhere to the mucosa, and prevent the escape of the glandular secretions Especially if venous stasis occurs, as it often does, blood and lymph extravasations take place, microorganisms develop on this albuminous soil and the catarrh of the mucosa results

This, in my estimation, is by far the most frequent way a post-nasal catarrh is developed I will add only that, as far as I know, Bosworth was the first who claimed a diminution of the secretion in this disease, although for different reasons than mine That such people discharge more than others proves nothing The dried masses lying in the post-nasal space are foreign bodies which the unfortunate possessor tries to get rid of by hawking, coughing, blowing or the like This only increases the glandular secretion of the neighboring parts, i e, of the nose, the lower pharynx and mouth It seems to me, that the so-called granular and lateral pharyngitis and the hypertrophy of the tonsil of the tongue are nothing less than a consequence of this condition So we can say we have an increased discharge of phlegm *through* a retropharyngeal catarrh, but *not coming* from the retro-pharynx

Another way for the development of such a catarrh is the following if the mucous membrane of the nose is already atrophic, or it has been cauterized to such a degree that the erectile tissue can not respond to every insult, or if it can, not for a long time, then it will happen that we can not breathe through the nose, although the passages for the air are wide enough, often only too wide This will occur, whether scabs and crusts are in the nose or not When the nasal mucosa is dried out by the dryness of our houses, then by inhaling only through the nose we have not the sensation as if our hunger for air is stilled The air after passing the dry nasal mucosa produces a disagreeable, not natural sensation in the retro pharynx The consequence will be that we expel it right away and breathe through the mouth

I do not know whether you ever had that sensation, that you could not breathe through the nose, although its passages were free enough In such a case the nostrils are extremely dry and your hunger for fresh air does not seem to be satisfied You are in a state of apnœa The air before reaching the retro-pharynx must be partly saturated with moisture and if it is not, it seems that it can not be tolerated, and only irritates this part Instinctively we give up nose breathing and breathe only through the mouth If scabs or crusts prevent nose breathing, this will naturally happen sooner As soon as this takes place, the catarrh of the retro-pharynx will develop in the same way as before

I took the swelling of the nasal mucosa as an example only for obstructions of the nose Anything else that obstructs nasal respiration as polypi, etc, will naturally have the same effect The fact is, that any atmosphere containing less than 40 per cent, of humidity will have the same effect if a person is subjected to it for a longer time, and this we all are, more or less, during at least five months of the year Although the human body can live under many unsanitary conditions, still we must not forget that a certain amount of moisture in the air is necessary for respiration, as well as for transpiration

A heated room should not be warmer than 65 degrees F If we then feel cool, it is a sign that there is not enough moisture in the air, in other words that the air not only absorbs from the upper respiratory tract, but from our lungs also humidity, and with that heat As soon as the hygrometer in a room with 65 degrees F shows 50 to 60 per cent relative humidity, this will be rather too warm, than too cold But this never occurs in our houses during winter time

On the contrary, the people feeling cool at a temperature of 70 degrees F have extra fires made, and bring the temperature to 80 degrees F and above, as I have not infrequently seen it If they try to go out into the open air, where a humidity of 80 to 90 per cent encounters them, these extremes must have a very bad effect on the whole system, and "colds" on every *locus minoris resistentiae* will be of general occurrence The principal reason why so many people like a Russian bath in winter, is that they are only too glad to fill their whole respiratory tract with moisture This relieves them greatly of the dryness in their system

I will add here that I always noticed more patients complained of dryness of the throat and nose after a cold spell But during the last winter, 1894-95, which was a very cold one, the number of patients at the Montefiore Home who complained of this was immense It was entirely out of proportion to the few patients whom I see at the above institution in summer, when they are in the open air during the greater part of the day

The answer how to prevent the bad effects of our poor heating system, will be, not only do we need in building a house a mason and a builder, a carpenter and a so-called sanitary plumber, but also a man who, from a medical standpoint, could judge whether the heating system and other things are sanitary or not But so long as we do not have such officers, we have to see to it ourselves that the furnaces are correctly built, that is, not too small, etc, and that a provision for the supply of moisture be attached to the furnace

This latter is, so far, very hard to fulfill I have written to different furnace-makers but all the appliances for this purpose which I have tried were not satisfactory It is my conviction, however, that ere long this will be improved if only the attention of the physicians and the public is drawn to it

The next point that comes into consideration in connection with our subject are the so-called colds As natural and well founded as it may be to try to prevent colds, so ridiculous and in its sequelæ so dangerous is the fear of catching cold, that it terrorizes in this country all classes of the population You can justly say, that never had the people such nonsensical, hare-brained ideas regarding the hygiene of their bodies as at the end of the enlightened nineteenth century, when everybody thinks they understand a good deal about medicine Through advertisements of patent medicines, indorsed not unfrequently by prominent ministers, through unscrupulous newspapers presenting unripe medical ideas to the Sunday table of their public, they learn just enough to make everything wrong The manner in which we dress ourselves, how we live, when we go out, or stay at home, etc, in everything is governed by one idea, the ghost of catching cold Although it may be that many people frequently catch cold in the open air, this should not be a reason for us to seclude ourselves from it On the contrary, we should just go out in the open air, as these people become ill just because they do not get enough fresh air The animal organism is destined to breathe permanently in the open pure air, and every hour that we sojourn in closed rooms is detrimental to the organism Naturally I will not say by this, that we should give up our homes, our culture, etc, and become cave dwellers, troglodytes or, like the old Germans, sleep in the woods on bear skins, by no means Only one thing I should like to impress upon the public, that we should extend our cultural endeavors also to the care and proper development of our respiratory organs Let us stop for one moment to consider how many hours the average person in New York is in the open air, and we shall soon see that we do a great deal for our digestive, but nothing for our respiratory organs In the morning one walks for a few minutes to the nearest station or car, rides down town in a vehicle overcrowded with humanity, and filled with the most miserable atmosphere, only to remain an entire day in an office, or more frequently still, in a factory loaded with dust, smoke and all possible foul gases, a factory that is never reached by any fresh air draught Evenings one returns homeward in the same manner, to go afterward into an overcrowded theater or the like

And the women? Well, the poorer ones work in a cigar factory or in a sweat-shop, packed together in a room, the air of which would even be too bad for the worst criminal The well-to do women are better off in some respects, but with them the fear of catching cold is so paramount that they do not dare to go out when the wind blows a little bit stronger, or even if it should rain a trifle In accordance with these ideas the children also are brought up One does not risk sending them out, without being convinced beforehand that no rain or snow is likely to fall If, however, they are once caught in a shower, or the like, then naturally such a child has a cold, and one reproaches one's self for having been so careless I can not restrain myself from reminding you of the words of an old physician, Johann August Unzer, who wrote as follows "Nature has given to the man the open air as the element wherein he should live Nevertheless we have been too politic, that we should not have noticed that this element is soon too cold or too warm, soon too moist or too dry, soon too windy or too quiet We take care that our children, who are born to breathe fresh air, do not come in contact as long as possible with it We consider it a matter of conscience to take them on a beautiful day, out of the stinking room into the open air, that by no means they should get too early a better air than that infected with the smother of effluvium, with the smell of the swaddling clothes, food, coal and foul vapors Yes! in order not to lose any of these precious odors, we plaster up the windows and cover up the doors We grown up people so little lay aside the prejudice of our wet-nurses and parents against the free air, that we prefer to look at it as the cause of most diseases And when we, finally, through this pernicious smartness have acquired bad diseases, we lock ourselves up in a still much worse air, nail our windows and wish that our servants were ghosts who could come through locked up doors, only that we should not need to suffer a little restoration by opening them So peculiar are people, when they become too smart for Nature!"

So far, Unzer, whose words are more applicable today than formerly

If we want to cure a post-nasal or similar catarrh of the respiratory organs, it is not sufficient to prescribe a gargle or a spray, we must treat the whole body, as every cold, every noxiousness of the skin works back on the mucous membranes

Our whole mode of living is apt to make us susceptible to the influence of weather, and therefore we must fight against it, we must harden our body, not to get a coryza or bronchitis from every so beneficial breath of air. We must move daily for a certain time, not too short, in the open air, and especially should we spend our vacation, our pleasures in the open air. If you send your young people, suffering from any chronic trouble of the respiratory organs to the mountains, you will find them only too often in an overcrowded ballroom, dancing all night. How much better would it be for them, to do this in the open air! When shall we see the day, that our children are no more taught in overcrowded prison like school rooms, but, as it is the highest of my ideals, in a garden under the trees? To have a school for hundreds of children, without even an open place to play in, as the custom is now in public and private schools, is a crime against the rising generation.

Another prejudice that prevails here more than elsewhere, is that one should go out little, or not at all in rainy weather. The old story goes, that one gets wet feet from it, and that is detrimental. But why this should be more detrimental than wet or cold hands, no one can as yet explain to me. The young plant needs rain for its life, and should we deprive our children of the same element, that acts so refreshing and vivifying upon them? Is it not unheard of, that school children are not allowed to go home at the noon hour when a few drops of rain fall from heaven? And is it not a shame that a school commission, unassisted by physicians, has made this a law?

Not long ago, Dr. F. Welz made investigations in the hygienic laboratory in Freiburg upon the contents of bacteria in the air. He showed that an increase of bacteria takes place toward the warmer season, a *decrease* in *winter* and *in rainy weather*. So from this side also, rain is considered favorable and healthy. You most likely have heard of the great "curer" Kneipp. How is it that this Bavarian priest, an honest, as I believe, but absolutely ignorant peasant, has such great success? If you come to his village, Worishofen, you will find all the patients badly clothed and their feet bare. The women wear no corsets, the men no underwear. "All or nearly all of them," says the *Normandie Medicale*, (quoted from the *New York Medical Journal*, Sept. 1, 1894), "have faith in the priest. This faith is evidently a great aid to the treatment, but it is incontestable that there is something in the priest's mode of treatment. This does not consist alone in applications of water; a number of medicinal herbs are employed, plenty of air, and a hygiene altogether different from that usually practiced. Very little clothing is worn, linen trousers, a coarse linen skirt, no underskirt, a jacket, a straw hat, and sandals, but no stockings, compose the usual costume. In this manner cutaneous respiration is facilitated as much as possible."

Our knowledge is to a great extent an empirical one, and we as physicians, have accepted lessons from wherever they came. So we have for example, the wet packs from a shepherd, Priessnitz, in Silesia, we have the much-used drug, cascara sagrada, from the Indians, and now do not let us be blind against everything that this peasant Kneipp teaches us. It is the cutaneous respiration that is systematically suppressed by our mode of dressing. This system of over-dressing is a total failure, as the diseases of the respiratory organs were never so numerous as in our generation. Away with this system that has made 80 per cent. of our population nothing but pathologic specimens! If Mr. Kneipp recommends us to go barefoot, this is only part of a system to harden ourselves, which we all know, but which we never follow.

Those country people, in Germany and elsewhere, are really lucky who go barefoot in summer, and thus not only harden their feet, but their whole system, especially their respiratory organs. Among such people you will seldom find rheumatism or catarrh. You can all do the same, even if it were only for a few minutes in your room. Even that helps. Before all, you should see that your children should go barefooted whenever they are at home. If they do it in summer in the country, so much stronger will they be, and so much less "catarrh" will they have in winter. Somebody told me that it is the style at the University of Oxford for the children of the professors to go barefooted until their twelfth year. Those children are said to be exceptionally healthy.

In this connection, says the celebrated physiologist Brucke: "I can not approve of the fact, that in some schools the children are forbidden to come barefooted. This is a gratuitous and unnecessary taxation of the parents. By his nude feet, the child injures neither the teacher nor the other scholars, but he does so very much by feet dressed with shoes, but not with clean stockings."

The celebrated African traveler, Rohlfs, tells how he visited a wild tribe whose chieftain was suffering from a terrible coryza. He was the only one who had this affection, and he was the only one who wore shoes and stockings!

That cold baths and washings are excellent means of hardening ourselves is generally known. If anybody should demur and say that the peasants as a rule bathe very little, and still are much healthier than city people, he forgets that the life of a peasant consists in perpetual hardening, and that he does not need these means. If anybody should believe that he keeps his body healthy by wearing underwear winter and summer, he is very much mistaken. Underwear is to be recommended only in very cold weather, otherwise it is injurious to one's health. The more clothes we have on, the more sickly we will be, and the less clothes the healthier. But the most objectionable of all, are rubber shoes and rubber boots, in which our feet roast as in an oven. The climate has nothing at all to do with this, and just because a change of weather occurs so very frequently here, we must protect ourselves against it in a natural manner, *i. e.*, still more harden here than elsewhere. I again quote from Brucke, who says: "The reason why Italians of the higher and middle classes are effeminate, is because the fashion compels them to go about even in the hot summer, chiefly in dark woolen clothing, under which they generally wear chemises."

If one compares this garb with that of the old Romans, one will very soon answer the question, whether the effeminacy comes from the climate or from the garb. So it is in this country, but I will abstain from drawing any comparison between the wild Indian and the hypercultured young American of to-day.

In conclusion, I quote from Shelley:

"   but in this life
Of error ignorance and strife
Where nothing is, but all things seem,
And we the shadows of the dream,

It is a modest creed, and yet
Pleasant if one considers it
To own that death itself must be
Like all the rest a mockery '

943 Madison Avenue

DISCUSSION

Dr Casselberry—Over heated apartments and too heavy clothing are certainly conducive to ' taking cold " I am of opinion that more persons "catch cold" by getting too hot, than by being too cold Neither is it necessary to become chilled while in an over heated condition in order to suffer that congestion of the mucous surfaces termed a "cold," although this doubtless is one of the methods, but the mere relaxing effect of heat to the body surface is capable of congesting at least the turbinated bodies and starting a cold This is especially true of over heated rooms With our present modes of heating I think 65 degrees scarcely sufficient, but 70 degrees F is adequate

I would advise against the wearing of very heavy underwear, preferring a light grade of woolen underwear for winter, supplemented by varying grades of outer clothing and overcoats For spring and fall, still lighter underwear of good merino or wool, and for midsummer, gauze for the ordinarily robust individual The daily morning cold bath invigorates the vasomotor system and so prevents more certainly than any other one thing frequent "colds" It and other hygienic management should supplement local treatment in catarrhal cases I am not in accord with the author of the paper regarding the evil effect of overshoes Ordinary leather will not keep out moisture, and wet or even damp feet in cold weather endured for hours without opportunity to change, is a prolific cause of "cold" A protective overshoe as low as will answer the purpose and removed on passing in doors seems necessary

Dr L R Ryan, of Galesburg, Ill —I did not hear the whole paper, but there are some points that are of vast importance, and one which should be brought to the attention of the people at large, and that is the matter of excessive clothing, and living too much in confined houses In this connection, an article I recently read in a current magazine comes to my mind It is in regard to the condition of the Tierra del Fuegans of South America, they were naturally a strong robust people, lived outdoors continually and wore little or no clothing and in their natural condition were free from disease When the missionaries established headquarters there and converted them to Christianity, inducing them to wear clothing and live in civilized houses and in a civilized manner, they immediately began to deteriorate physically, until the whole tribe has been destroyed by throat and lung diseases and especially consumption We must keep as closely as possible to nature and avoid those unnatural changes

Dr Woolen—If, as the gentleman claims, that in his State the children have colds, etc, in spite of their being out-of-doors all the time, there must be other reasons for the development of such catarrhs which I do not know, but I would certainly not blame the fresh air for it Regarding the Doctor's remarks about the seat of the polypi I must say that there are a great many seated much higher than the middle turbinated

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CANCER OF THE RECTUM—ITS EXCISION AFTER THE METHOD OF KRASKE AND MODIFICATIONS THEREOF, WITH A REPORT OF CASES

Read at the twenty fifth Annual Meeting of the Medical Society of the State of Colorado June 18 1895

BY CHARLES A POWERS, M D

CONSULTING SURGEON TO ST LUKE S HOSPITAL AND ATTENDING SURGEON
TO ST ANTHONY S HOSPITAL LATE ATTENDING SURGEON
TO ST LUKE S HOSPITAL AND TO THE CANCER
HOSPITAL NEW YORK

DENVER COLO

The old methods of excising the rectum have been in large part superseded by the sacral procedure, and it is safe to assert that of all malignant growths affecting this part of the body, but a small proportion will be found amenable to cure when dealt with from the perineum

Although Kocher, of Berne, had for some years added to the posterior incision a removal of the coccyx, it remained for Kraske, of Freiburg, to lay down those fundamental rules which, though since modified from time to time, enable us to cope with something like an assurance of success with this distressing affection

It was before the German Surgical Congress of 1885 that Kraske first proposed to gain easy access to the upper portion of the rectum by resection of the lower part of the sacrum This original procedure has since undergone important modifications Its essential details are as follows the patient lies on the right side somewhat in the Sims' position, the thighs and legs flexed and a stout support raising the pelvis A cut is made from the left border of the sacrum, opposite its second vertebra, to the anus, this cut quickly curves to the midline at its upper end and reaches the posterior surface of the sacrum and coccyx The coccyx is removed, the left lateral sacral ligaments severed, and the sacrum chiseled across obliquely from a point opposite its third foramen on the left side to the lower right hand corner The severed piece is removed and the bleeding checked The tissues are divided in the midline until the posterior surface of the rectum is reached The anus is freed and the rectum loosened, chiefly by blunt dissection from below upward, to a point well above the growth The peritoneum is opened, the rectum drawn down, cut off, the remaining end brought out below the cut surface of the sacrum and stitched to the adjoining skin

The peritoneal pouch is occluded by a plug of iodoform gauze and the entire open wound filled with the same Healing takes place by granulation and a sacral anus results

Valuable as was this procedure in the efficacy with which a high lying cancer could be reached, it left much to be desired and various improvements in technique were set forth as different operators gained experience Schede, instead of plugging the peritoneal pouch sewed it up as soon as the rectum had been drawn down and before it had been severed, and when the anus was not involved he united the cut end of the rectum to it, thus restoring the continuity of the canal and giving the control of a sphincter In practice it was found that the passage of feces tore out the stitches, prevented union, and a fecal fistula generally resulted To obviate this, Schede did an inguinal colotomy at the time of or directly after the operation This not only added to the time occupied by the serious major procedure, but left the lower bowel filled, and has now been superseded by the colotomy being done so long prior to the proctectomy as to allow of firm fixation of the gut in the inguinal region and a fairly thorough cleansing of the rectum itself This preliminary colotomy may be considered indispensable whenever it is desired to preserve the sphincter ani and do an immediate anastomosis

With a view to avoiding the loss of the resected bone and the consequent weakening of the pelvic floor, Levy, in 1889, devised an osteoplastic procedure whereby a flap of bone, together with the overlying soft parts, is turned up and replaced He made a transverse cut, some four inches long, across the sacrum at its lower end Lateral cuts are made from the ends of this through the gluteus maximus muscle, the anterior and posterior sacro-sciatic ligaments are divided, the bone chiseled across, and with an elevator the connective tissue on the anterior surface of the sacrum is separated The skin flap with the attached bone is then turned down and the rectum comes into view This is resected, the cut ends united, the bone flap replaced and sutured, the horizontal incision closed, the lateral ones united in part and well drained While this is, in theory, a suitable procedure, it is in fact difficult to perform and unsatisfactory in results, and it remained for Rehn and Rydygier to devise a procedure which seems thus far to give the greatest promise In this, an incision is made from the posterior inferior spine of the ilium to a point midway between the anus and the coccyx This is met by a transverse cut across the sacrum at the point at which it is intended to divide that bone The left sacral ligaments are divided, the bone cut across, the bone flap turned over to the right side, the rectum excised and sutured in the usual manner and the bone flap returned and sewed in place Gauze drainage is provided and the skin wound closed in part

Exfoliation of the bone rarely occurs, and even though this should take place, nothing will have been lost by the attempt at osseous repair The results in typical cases are all that can be desired, so far as concerns the immediate condition The retained sphincter insures the nearest approach to a normal bowel condition and the pelvic floor is left intact In those cases in which the anus is involved it is needless to say that this is impracticable Here the gut must be fastened to the skin In many cases, control of feces and gas will be improved by twisting the lower end of the rectum as advised by Gersuny In every case the inguinal anus should be closed in the usual manner so soon as the rectal condition may warrant

Whatever the procedure employed, sacral resection of the rectum can but be considered as belonging to the severer operations in surgery It may be easy or difficult to perform When the growth is small and the tissues about the rectum free from infiltration, a blunt dissection may be made with the loss of but little blood If, however, the perirectal tissue be involved, a wide dissection must be carried out and the operation may be long and bloody Oozing from the cut surface of the sacrum can be checked by gauze tamponade, all bleeding vessels must be quickly caught and tied At all times intelligent retraction and active assistance are of the greatest value It is all important that the loss of blood be the least possible, hemorrhage being the greatest factor in the production of shock

In nearly every instance the peritoneum must be opened, to allow a drawing down of the gut This adds but little to the danger of the procedure, an immediate suture can quickly be made The sigmoid flexure must be detached from the surface of the sacrum to allow a drawing down of the upper segment

In cases in which four inches or more of the rectum have been resected, it is necessary to loosen it very thoroughly from the sacrum in order to approximate the cut ends without traction This loosening is accomplished in part by dividing the mesentery, and in part by blunt stripping up It is not infrequently necessary to ligate the superior hemorrhoidal artery on either side, and in such cases Kammerer has proposed to cut away still more of the rectum and bring down a portion better supplied by other branches of the inferior mesenteric, in order to do away with the possibility of an anemic necrosis of the lower end of the gut The approximation must be made without tension, for the blood supply is poor at best, and the bowel is without the peritoneal investment which is so great a factor in prompt healing In those cases, however, in which there is no tension, good blood supply and a diversion of the feces through a previously made inguinal anus, primary union will be found the rule rather than the exception

In certain cases the surgeon will find it necessary to content himself with a partial operation and to postpone completion until a subsequent sitting So, when the amount of blood lost has been considerable and the shock severe, as in patients who presented a previously weakened condition, one may be obliged to hastily tack the bowel posteriorly, plug the peritoneal opening and tampon the entire wound The operation is a severe one, frequently bloody and tedious The writer fails to understand Bardenheuer's assertion that he completes the procedure in fifteen or twenty minutes, stripping up the rectum by blunt dissection and often finding it unnecessary to open the peritoneal cavity If amputation be made and a sacral anus established it may be possible to avoid opening the peritoneum Rarely can this be done, however, when the bowel ends are united

While the mortality attending this operation has steadily diminished, it is yet considerable From the data at hand, I judge it to be in the hands of competent operators, about 20 per cent The chief causes of death are shock, hemorrhage and exhaustion, peritonitis, I believe to occur but seldom, and sepsis should be infrequent Drainage is easily made and should be liberal A caution may be made regarding the too free use of iodoform gauze, the surface left is large and quickly absorbs I have myself seen iodoform intoxication, very quickly disappearing, however, on removing the drug

My own operations have been three in number In one additional late case I removed the sacrum, but found the disease too far advanced to warrant attempt at excision I should have done better had I followed this course in my first case which was the fatal one In a considerable number of instances I have advised against radical operation, in place, thereof, a palliative colotomy

My cases are as follows

Case 1—Cancer of rectum, Kraske's operation Death from acute anemia and shock Miss K, age 27 years, single, was transferred to my service at St Luke's Hospital New York, July 25, 1893, by my colleague, Dr Robert Ab who was about leaving town for the summer No previous history bearing on the present condition Three months before seen she had begun to suffer with obstinate constipation from which she had previously been free Fecal movements were narrow and painful, but not bloody The patient had lost thirty pounds in weight, and much strength during the three months, her general condition was fairly good Pulse 86, temperature 99

The examining finger introduced into the rectum revealed an annular, irregularly nodular mass extending three inches above the anus The constriction admitted the tip of the index finger, which could be swept about, over and around the tumor On vaginal examination the mass was felt to push the posterior vaginal wall forward, but not to involve it The lymphatics in the immediate neighborhood were enlarged

Eight days were occupied in putting the patient in the best possible condition, and on August 3 the following operation was made ether, six inch incision over sacrum and coccyx to anus, coccyx and lower segment sacrum removed (Kraske) Anus and lower part of the rectum freed from surrounding tissues Dissection difficult and bloody, owing to fairly extensive perirectal infiltration Cancerous mass found to extend well up anteriorly Peritoneum opened, mesorectum severed rectum drawn down and cut off stump brought out beneath cut surface of sacrum and sutured to skin Peritoneal opening plugged with iodoform gauze, wound filled with boro-salicylic gauze The operation lasted two hours and the patient lost a considerable amount of blood Vessels were clamped as soon as seen, but there was a continuous general oozing which could only be controlled by pressure At the close of the operation the pulse ran from 140 to 160 An infusion of salt solution reduced it to 120, in spite, however, of active stimulation and further infusion the patient sank progressively and died thirty six hours after the operation A microscopic examination of the tumor showed it to be carcinoma

I am now convinced that this growth was too extensive for removal This was not understood until the rectum was exposed I should have done better had I contented myself with a proctotomy above the tumor, or, better, done an inguinal colotomy at a subsequent time In this connection the following may be of interest

Case 2—Mrs D, a woman of about 40 years was referred to my service at the New York Cancer Hospital Oct 1, 1893, by colleague Dr H C Coe For six months she had suffered with painful bloody stools, steadily diminishing in size Examination revealed a nodular mass encircling the rectum about two inches above the anus The finger passed through this High infiltration was not felt per vaginam October 11 Kraske's operation On opening the peritoneum, the infiltration was felt to extend too high to warrant attempt at removal Peritoneum closed and wound packed The patient made a smooth convalescence and was advised to have an inguinal colotomy made whenever the symptoms should demand it In April, 1894, she was in good general condition I have not heard from her since

Case 3—Cancer of the rectum Kraske's operation Recovery *Freedom from relapse at the end of twenty months* Mrs F, aged 35 years, was referred to my service at the Cancer Hospital Sept 28, 1893, by Dr F A Manning For six months she had observed mucus and bloody discharge with rectal pain The stools had diminished in size, on examination a hard nodular mass was found to encircle and constrict the gut just above the anus Operation Oct 9, 1893, sacral resection Peritoneum opened, mass found to extend one inch above the rectoperitoneal margin and to involve the anus Rectum amputated above growth and upper end fixed beneath sacrum Wound packed with iodoform gauze Slight iodoform intoxication which disappeared on change of dressing Undisturbed convalescence The patient regained good control of feces but not of gas I learned of her recently She has had no evidence of recurrence Pathologist's report "carcinoma"

Operation was in this instance easy The growth was confined to the rectal wall and anus The loss of blood was but slight I do not think we can determine definitely the extent of the disease prior to exploration We can not make sure in an individual case that the operation will be accomplished rapidly and easily We must in all instances be prepared for a long and difficult procedure

Case 4—S M, a man of 52 years was admitted to my service at the Cancer Hospital June 15 1892, with a history of having had occasional bloody stools for three years, these having of late become painful Examination revealed a tender, bleeding, granulating tumor just above the anus, through which the fingers could be passed The anus did not seem to be involved Operation June 30, 1892, in my absence by Dr Van Arsdale, assistant surgeon Sacral resection, six inches of rectum removed, end of gut drawn down and stitched posteriorly to anus Wound packed, smooth healing On July 18 and again on August 21 secondary operations were done to restore the continuity of the gut This was effected and the patient left the hospital completely healed and with control of feces, though not of gas Pathologist's report "carcinoma"

Case 5—Cancer of rectum—Resection—Recovery Mrs R a woman of 39 years, came to my office in February, 1894, with a history of painful defecation during the past four months She had occasionally noticed blood in the stools and had recently felt a lump" Examination revealed a rough annular, friable mass just within the anus and lying rather on the anterior rectal wall On vaginal examination it seemed limited to the lower part of the rectum Operation, sacral resection, peritoneum opened and gut pulled down A string of infiltration ran well up on the anterior wall After removal of some five inches of the rectum, sparing the anus, the tension was so considerable that in view of the patient's general condition it was deemed unwise to prolong the operation by a high loosening of the gut It was accordingly brought out beneath the sacrum Undisturbed convalescence Pathologists report "carcinoma" I am unable to ascertain the present condition in this case

All of these operations were made before I became familiar with the osteoplastic procedure of Rydygier In a future suitable instance, I should proceed, so far as present knowledge goes, after his plan It permits of the most thorough extirpation possible with restoration of the bony parts

Much depends on a proper selection of cases A large proportion of patients with cancer of the rectum will be found, when first seen by the surgeon, to be in too advanced a condition to warrant thought of cure The disease progresses slowly and often reaches an advanced stage before the increasing occlusion of the gut seriously calls the patient's attention

The earliest possible diagnosis on the part of the family physician is of the greatest importance These cases first come under the care of the general practitioner, and his examination should be most thorough In no affection about the rectum should digital examination be omitted The examining finger is of far greater value than instruments, so far as the region which lies within its reach is concerned In case of a suspicious though indefinite ulceration, dilatation of the sphincter with removal of a small piece of the tumor for microscopic examination will be found of the greatest service So long as the patient's condition warrants, we are not justified in leaving any measures undone which may aid in establishing a positive diagnosis I have more than once called attention to the fact that age is of slight value in differentiating cancer The age of the patient in Case 1 was 27 years Cancer is not so very infrequent in patients under 30 years

It is difficult to obtain the exact mortality attending extirpation of the rectum, in general, it may be estimated at about 20 per cent Before the introduction of the Kraske method, it was something like 50 per cent It will doubtless fall materially as the selection of cases and the operator's technique further improve

Curtis collected statistics of 420 cases from 11 clinics and found that without separating the perineal from the sacral operation, the mortality was 15 5 per cent It is without doubt greater in the sacral than in the perineal, as in the former the disease requiring operation is further advanced and the procedure itself is much more severe

As regards the chief point in any operation for malignant disease, immunity from relapse, I am unable, with the literature at my command to give even approximate figures Curtis, in 144 cases which had run over four years, found 21 5 per cent of four year cures These were, however, both sacral and perineal operations, and more of the latter than of the former Whatever the percentage of radical cures may be, it is sufficient to encourage surgeons in their attempt So far as we now know, the only hope of cure in cancer lies in its early recognition and prompt and wide excision, and it is on these lines that progress must and will be made Advance in the past ten years has been steady and much ground has been gained It is to be hoped that the future will give us a specific, be it in the line of serum or other therapy, against this most malign disease At present, however, our trust must be placed in operative procedure, and in the accomplishment of lasting results the physician and the surgeon must cooperate

Stedman Block

WHAT CAN AND CAN NOT BE DONE FOR NASAL CATARRH BY LOCAL APPLICATIONS

BY ALLEN DEVILBISS, M D
TOLEDO OHIO

The fact that the majority of humanity are afflicted with some form of nasal disease, and after doing all we can by hygiene, internal medication, and if necessary the removal of tissue, there will in most cases remain a condition requiring local applications, are sufficient reasons for our trying to suggest a plan whereby the remedy used may be applied so as to produce the best results

A spray thrown into the anterior part of the nose with its direction parallel with its floor, can not be expected to produce a cure or relief, on account (as a rule) that the diseased condition is located in the roof and not the floor, neither can we expect to accomplish good results by inhaling through the nose a vapor only to come in contact with the mucous covering the membrane

To do effective work, the instrument should be so constructed that its point may be carried into the vestibule far enough to reach the nasal cavity proper, and the spray directed toward its roof so that the mucus will be washed away by the solution used This can not be accomplished by the counter current from an atomizer or the vapor from a vaporizer

To meet this want I devised an instrument with a movable spray-carrying point which may be set so that all parts can be treated by a direct current, it may be used for spraying any remedy that will be beneficial to an inflamed mucous membrane, or that will not injure a healthy one It has no leather or rubber washer, consequently can be made perfectly clean by boiling Solutions can be easily warmed by holding it over a gas jet or lamp a few moments, and this is essential, for by applying them warm there is no shock, and it soothes the membrane, which it will not do if applied cold

When using oils keep the point below the level of the cup, as you will then have the advantage of gravity to bring it from the cup to the point ready for atomization In this way the oil is carried to the membrane with as little air as possible

When treating the patient anteriorly, set the point upward to throw in the direction shown by No 3, Fig 1 Place the left index finger beneath and near the movable point, carry it into the nose, resting the finger upon the upper lip, raise the cup above the level of the nose, give two or three compressions of the bulb, and the roof of the nose will be flooded with the remedy By using it in this way there is no danger of irritating the membrane by continually pumping air against its surface, the air current being a necessity as a carrier and in every other way a disadvantage

Treatment in a majority of the cases given in this way will be all that is required, but in some cases it will be necessary to reach the posterior turbinate bodies and meatuses by throwing a spray from behind the soft palate This can be accomplished best by having the patient hold down his own tongue, for by so doing the parts will remain passive, which must be to make a perfect application, fill the cup part full of the solution to be used, heat over a lamp or gas jet, set the point anteriorly at an angle of 45 degrees, then carry it into the throat close to either side of the uvula, back of the soft palate, being careful not to touch the posterior wall of the pharynx, keep the left hand close to the left side of the mouth, so as not to be in the way of seeing, then with one or two quick but prolonged pressures of the bulb we will have covered the post nasal cavities There are but very few patients who can not in this way tolerate treatment (if warm oils are used) without gagging, or not take more time than it would in a manner not half so complete

It requires but little time to teach patients how to make applications in the nose anteriorly, by setting the point upward as shown by No 3, Fig 1, placing the thumb of the left hand under the tube close to the movable point as shown in Fig 2, the fingers being placed upon the upper surface of the tube, then carry it into the nose until the thumb rests upon the upper lip, using it for a steadying point and gauge as to depth of entrance, elevate the cup above the level of the nose so as to have the advantage of gravity, then give two or three quick but prolonged compressions of the bulb and the application will be sufficient, in the majority of cases, when not, in a short time they may be taught to make them posteriorly, they quite soon learn how to drop the tongue in the floor of the mouth or hold it down with the tubes of the spray producer Many can use it without seeing, but they can see how to use it by the use of a mirror and keeping the hand that holds the in-

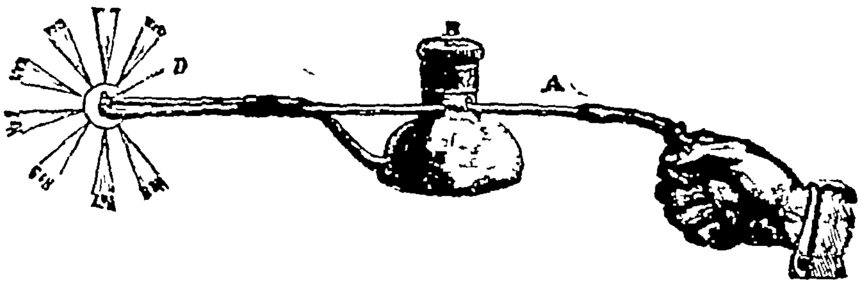

Figure 1

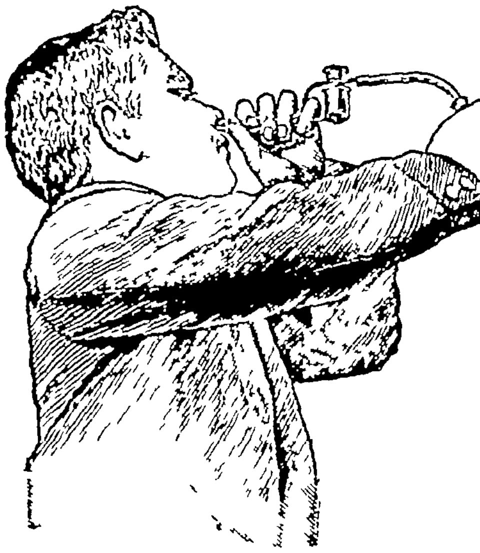

Figure 2

strument to one side as shown by Fig 3, so as not to obstruct the light

Children who do not breathe easily through the nose may be relieved by a few applications of warm oil This cleans out the nasal cavities and allows them to breathe through the nose In treating children it is best to leave the point of the spray straight or nearly so Applications should be made while lying down Place the index finger of the left hand close to the point, and rest it upon the child's upper lip, then compress the bulb a few times which will fill the nose with warm oil

I believe that by following up this plan of treatment with children when they have colds they will have much less trouble when they are older When treating an acute condition, no irritating remedies should be used Warm aseptic oil is all that will be beneficial locally If warm enough it will soothe, protect and cause a contraction of the capillary vessels, thus relieving the congested parts

In simple chronic nasal catarrh, there will be many cured, and marked benefit received by all, from spraying a warm aseptic oil over all parts affected If the discharge is purulent or tough or ropy, first clean with a solution made from Seilers' tablets, then apply the oil, the addition to the oil of an alkali or antiseptic will be of service if not made too strong In cases of hypertrophic nasal catarrh where inspiration is interfered with, beside the local treatment given, the same as in simple chronic rhinitis, tissue may have to be removed It is no use to treat these cases for a short time They must be treated or treat themselves every time there is an acute attack By so doing, instead of growing from bad to worse, an improvement may be expected

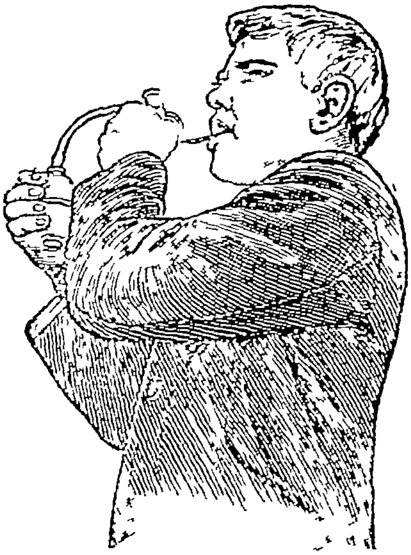

Figure 3

This I find patients will be satisfied with, if it is so represented to them, instead of promising definite cures

In treating atrophic nasal catarrh the essential thing to do is to clean the parts It may be necessary to use Dobell's solution or a similar one to remove the crusts, but generally the better way is by direct applications (as before described) of oil, for the reason that we have no osmotic action, no increase of desquamated epithelial cells, no inflammation set up by throwing it into the middle ears, all of which we may have by using watery solutions

It is often beneficial to add to the oil some form of an antiseptic such as oil of wintergreen, camphor, menthol, or oil of eucalyptus, five drops to the ounce, etc The list of antiseptics is a long one to choose from, and the odor and taste of each differ so much, that we need not have any trouble to carry out the proper line of treatment and make sufficient changes to satisfy the mind of our patient I treat them until I get the parts under control and then teach them how to make the application

A dentist can scrape off incrustations from a tooth, but he can not give the fine polish to the enamel that it had The rough condition left serves as a predisposing cause for the return, but if a brush is used from time to time the incrustations will be prevented Just so with the nasal mucous membrane after there has been a chronic inflammation of it The original condition can not be restored by any course of treatment, but by treatment from time to time the serious difficulties that would result therefrom may be prevented and the patient made comfortable through life This they are entitled to, more they can not procure, and they will be content unless promised a radical and permanent cure In a healthy condition the nasal mucous membrane furnishes about sixteen ounces of fluid every twenty-four hours By it the material filtered from the air or accumulations from any other source are carried through the nasopharynx into the esophagus and stomach unnoticed But when from any cause an irritation or inflammation is set up, the amount of fluid may be increased or lessened If increased, soothing applications must be made to relieve the irritation or inflammation

If the amount of fluid has been lessened, we find desquamated epithelial cells, mucous corpuscles, and the impurities taken from the air remaining in the nasal cavities, and we must accomplish what the diseased condition prevents being done in a natural way If the case be one that has not progressed too far, by using a solution that will cleanse, soothe and protect the parts, they may be restored to almost a natural condition

Where the pressure of adventitious tissue has caused absorption of the glandular elements which prevents the process of exosmoses from the numerous blood vessels, the sooner a patient realizes he must put his nose in the same line with his hands and face to be cared for, the better off he will be No one would expect to keep the face continuously clean by washing it for a month or two, neither can the nasal cavities by any kind of treatment for a short time, (when the conditions just described exist) be kept continuously in a clean condition, which must be, in order to have any hope of improvement or prevent an increase of the difficulty

I have long since arrived at the following conclusions that surgical work must be done in certain cases, constitutional treatment is necessary in some, local applications in all, and that the remedy should reach all parts affected and in itself or the means by which it is applied, shall be non-irritating, and that it is useless to prescribe a spray producer for a patient without first teaching him how to use it

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Dear Doctor —Please direct the attention of your friends to our JOURNAL We will be pleased to send sample copies to any names you may suggest

HYPNOTIC INSANITY

Read before the Marion County, (Ind) Medical Society, June 11, 1895

BY E D MOFFETT M D
INDIANAPOLIS, IND

In writing upon this subject, I wish to show the true merits of hypnotism, and to congratulate my profession upon the fact that we have been slow to indorse this one fad which came to us a few years ago with such wonders in the cure of many diseases Yes, the greater body of our profession discard it altogether

The hypnotic state is a diseased condition of the mind, and I feel that it is possible to prove that it is the worst form of disease—that of insanity

Hypnotism, mesmerism or suggestion is that condition of body or state of mind which is characterized by an apparent sleep with a perversion or destruction of the will, or that part of the will which governs the reason and judgment For example, the person under its influence will stare into space or with eyes closed seems to be perfectly unconscious of himself or of his surroundings, and will follow the dictates of a supposed hypnotizer, no matter how absurd and contrary to the sense of propriety

Suggestion is the primary law of all knowledge Therefore know that we are handling only the extreme possibilities of this law All knowledge is derived in three ways suggestion, deduction and induction In our early childhood we know nothing except it be imparted to us by friends, or by some object, as a tree which suggests some thought to the novice, thereby a state called memory is created Likewise a mirror or the gentle stroking of the forehead by an operator with thoughts expressed, will produce the same state of mind called suggestion And when that individual mind has lost, by this process, the will power governing judgment and reason, we have what is called true hypnotism Please to remember this definition, for soon we will find what a wonderful power the law of suggestion, or the perverted condition of it which misleads, has in this world

Advanced in years we begin to reason by deduction and herein lies the power of theorizing If you remember, a few years ago I read you a paper upon the subject of "Theory in Medicine," which brought out some of the fallacies of the deductive method of reasoning in medicine

By induction we have much of our true knowledge to be thankful for In suggestion we have three stages receptive, somnolent and cataleptic First, to be able to receive a suggestion the mind of the individual must be willing to receive Here again is the will brought into power To receive or not to receive is the question Now what harm has a thought or state of mind upon an individual who has the equilibrium of mental forces well balanced by the will? None whatever Right here is the beginning and ending of a weak and strong mind He who stops to reason is wise, no matter how imperfect the conclusion But he who receives and reasons not (with the will as the governor of the mental engine) is prone to mental aberrations Whether the individual has entered a physical drowsy stage of hypnotism or not, if we have that state of mind forces, after receiving an impression from a thought or an object, which is embodied in the definition given, we have that mind hypnotized—diseased Diseased because no physiologic laws, either physical or mental, can be destroyed without being pathologic

The complete somnolent stage is that condition in which we have catalepsy, and what is called suspended animation And those cases which from severity of pain become unconscious for an indefinite period and then regain consciousness without any apparent shock being the cause

Now let us see if it is not a logical conclusion that the mental state and causes of insanity are identically one and the same phenomena as perverted suggestion

So far as the mind and thought is concerned, insanity is the loss of the proper coordination of mind forces It is an impairment or destruction of the will governing reason and judgment Example a brain takes on a suggestion from any cause, as some friend is trying to kill that individual If this be not so, and the reason and judgment governed by the will of this case can not be convinced by friends or by a logical conclusion of self-reasoning this brain is unbalanced

Whenever a brain takes on a thought once, it is a well-known law for it to be recalled at will and in time can become automatic To have this condition to take place at unusual times we have the state called auto suggestion, or the power of the brain to repeatedly place itself in a state or condition of thought unconscious to the individual Actions usually follow thoughts, and this is the reason we have to have asylums One who has had hypnotism practiced upon him is very liable to get into the state of auto suggestion Is not this true of all the insane, that there is a constant recalling of some absurd thought? And this is produced by the laws governing hypnotism—the reason and judgment at fault. Consequently, the insane are unnatural suggestable cases Here is my argument "Things equal to the same thing are equal to each other" Hypnotism equals the destruction of the mental force of the will, which holds in balance reason and judgment Insanity equal the impairment of the same forces Therefore hypnotism is insanity, conversely, insanity is hypnotism

Society is all agog with this dreadful disease Look at the youth who persists in dissipation at the dance and other enjoyments when his friends and physician try to bring him to his proper senses And do you say that the law of suggestion which has misled into supposed pleasure and enjoyment is not the cause of all this? A well-balanced brain is one that is temperate in all things

Again, a young man is pushed to extremes financially to keep up with society Soon his salary is too small to meet demands His mind wanders, embezzlement, exposure, prosecution and conviction results, and society laughs Society has been the medium of suggestion The law provides for the poor criminal, but the beautiful mirror which has suggested his downfall still goes unbroken Let a corporation, a body or society be the cause of one's downfall and it is all right But if an individual is the medium of one's errors it is quite a different thing, as in the following a man with reason unbalanced, plots with one somewhat weaker than himself to commit a murder The man who will use his erroneous reasoning and influence to cause another to commit such a crime, probably for a paltry sum, is hypnotically insane The suggestion being a hate, jealous love or desire for some special gain and the like, which has led his mind astray Is not the will here at fault?

The one who does the deed is hung for being a suggestable subject, insanely so While the other is executed for discovering the weakness of his brother

This is what the law does with those who are not insane enough to let their neighbors know of their weakness in time to commit them to an asylum Some time ago a man called at my office for dates of an injury received by a bucket falling from a building in course of repair The injury was a glancing one, and took off a part of the scalp on the top and front part of the head No concussion or shock followed He is now preparing for a suit for damages In course of his remarks he declared that the injury had affected his brain and left him in such a state that he might kill me then if he should get mad I wish to tell you that the only relation of his injury to present mental conditions is that of suggestion by a supposed permanent injury to the brain, an impossible condition He is insane upon this subject and hypnotically so The poor man is prone to go on with his auto suggestion until he does some one bodily harm

This is the form of insanity which has produced our assassins, Guiteau, Mayor Harrison's murderer, etc Just to think, in this day of learning that there is no law to take hold of people who are possessed of threats against their brother or against themselves—cases of suicide and its attempts We are much in need of statutory provisions for such people

Even religion is not exempt from this disease Take the early days of persecutions, crusades, witchcrafts and its punishments, all produced by a want of proper brain balance, but no phase of society is more rapidly getting out of the turmoils of this disease than religion—and doing so by consistency and education If there is one phase of society which is slow in progress in the right direction, it is that of politics So little of true governmental principles are taught to us in early youth in school, we become grown and do very little reasoning for ourselves We are partisans because of the law of suggestion and not much force or reasoning is expended in such attainment Men go wild over an argument during a campaign or over some great financial question, the conclusion proves the premise, but too often the premise is wrong

Our last panic was nothing more than an epidemic of wild suggestion that spread over our country like a cholera germ And the same disease played havoc with the LIII General Assembly, and with our late Indiana Legislature Germs of poisonous thoughts get into the brains of men and they spread worse than an epidemic disease

Medicine comes in for its part Do not think because we are last that we are least Many examples could be recited, but you can recall many, and time forbids

Look at the pandemic effect of the "elixir of life," the much abused operation upon the cervix in the past, and the extreme of supposed cures to which Battey's operation has been subjected, many of the untimely and hasty therapeutic experiments, etc Why do we not all know the truth first and then tell it, instead of proclaiming a thing true, then theorizing to prove it?

A very prevalent class of cases are those of abnormal sexual relations I refer you to the learned treatise on "Psychopathia Sexualis," by Kraft-Ebbing, translated from the German by Chaddock, a book well worthy of the perusal of the profession

Hysteria, melancholia, catalepsy I believe to be in different stages of suggestion, usually caused by some impairment of one or more of the vital organs other than the brain Disease of the liver can produce marked melancholic insanity I never have tried to practice hypnotism, but have seen several cases by others and a few cases capable of producing the state themselves While in the hospital we had a case of true catalepsy which could be easily put into the state by a hypodermic of a small portion of morphia I could not trace the history of this case, but I believe the auto-suggestion was produced by an impairment of the mental function

A case of labor under my care was completely hypnotized by the severity of the pains She lay with eyes open staring into space, pupils contracted, pulse and respiration normal There was only a slight movement of hips during the pains When she awoke from her partially cataleptic state she was surprised to know the labor had ended Three days later she went into this state again and continued so for three hours—probably produced by a suggestion on my part that if she did not take better care of herself she would have a chill and might die

Some time ago I attended a spiritualistic séance After a short and literary effort upon the part of the spiritualist, she tried to hypnotize herself by looking intently for a few moments into one corner of the room She should have selected a bright object, for I could readily see she was not an auto suggestable case She made a failure of the above, but she soon began to get communications from spirits for a few of the faith believers present And here is another of our hypnotically insane beliefs The uncontrollable desire for smoking and drinking is mental disease also

Treatment —If my argument be true, every State and nation should make laws prohibiting the public exhibition of hypnotic cases It should be made a penal offense to try to induce it other than for a cure of the insane And from what little can be accomplished with it in these cases, there will not be much of this mal-suggestion used

Nevertheless, there is a good lesson taught in Chaddock's "Psychopathia Sexualis" From a number of the sexual perverts described by him, we draw the conclusion that the cases are insane upon their particular phase of sexualis And please not to forget that these people get into this state by continually harping, thinking and recalling their abnormal thoughts and putting them into action All this by *auto suggestion — thought* and action repetition Where is the will, reason and judgment of these cases? Talk about the world not being full of insanity!

Some of you are probably thinking why we are not all incarcerated Here is a fair solution to the problem It seems to be a case where the majority rules, or to the victor belong the spoils Chaddock tells us that many of his cases have been relieved and cured by the practice of creating a new train of thought and a regenerated will, by proper suggestions, while the patient was under the hypnotic influence Is there not a thought revealed in these cases worthy of consideration? Here it is all of these cases were far advanced in immoral dissipations, who sought him for treatment They realized their insanity and sought relief Their will was not wholly destroyed A cure was effected in a good per cent of cases

I believe that herein lies a system which might prove wonders with the incarcerated insane That is, to make them by some process, realize that they are mentally diseased, and that there is a cure for many, sick as they are, and if they could be made to realize this and seek the remedy with as much earnestness as did Chaddock's cases, we might have a place for true hypnotic suggestion but not "hypnotic insanity"

16 W New York Street

REMARKS ON APPENDICITIS

Read at the meeting of the Northern Tri State Medical Society at Coldwater, Mich, July 9, 1895

BY J H CARSTENS, M D

PROFESSOR OF OBSTETRICS AND CLINICAL GYNECOLOGY DETROIT COLLEGE OF MEDICINE CHIEF OF STAFF AND GYNECOLOGIST HARPER HOSPITAL PRESIDENT OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS ETC

DETROIT

Appendicitis is talked of and written about a great deal, and when I go around with my professional friends who practice in the small cities and villages, they all say, "Appendicitis is a great fad We seldom see a case, why is it that you see so much and operate on so many, while we rarely see a case?" Some of them even, who look at everything with a pessimistic eye, say that many cases are operated upon and reported that are not cases of appendicitis at all Some of them have quite a large practice and only once in a while do they see a case that they call appendicitis, and how others can see dozens and hundreds a year is utterly beyond their comprehension But the solution is very easy, from what I am able to find out, from the number of cases of appendicitis occurring in the course of a year in a large city, I have come to the conclusion that about one case of appendicitis occurs to five thousand population, when we consider that throughout the country there is only one physician to less than five hundred inhabitants, which means less than one hundred and fifty families This is the average, some have a great many more and some a good many less, but a physician who has three hundred families, I will say, has a pretty good practice, and if any one should have double that number, he has an extraordinary practice A physician with three hundred families, that is, a good large practice, would have about a thousand people under his care, and if the above statement of one case of appendicitis in five thousand population is correct, you would naturally conclude that the average physician with a fair practice would only see a case of appendicitis, on an average once in five years

Perhaps my estimate is too high, say a case of appendicitis occurs to every two or three thousand inhabitants, and it certainly does not occur any oftener, then it would still hold true that the average general practitioner would not see a case of appendicitis but once in two or three years Now, let us go one step farther and bear in mind that appendicitis is sometimes a very obscure disease, which the general practitioner will very often overlook, and no blame can be attached to him for that, as he sees these cases so seldom We can furthermore see that the statement of the general practitioner, especially of those living in the country and the smaller towns, that appendicitis is a rare disease, is perfectly true from his side of the question Still, the field of medicine has been so thoroughly and repeatedly gone over, the cause, the pathology and the treatment of the general run of diseases, that the more rare and obscure diseases are now attracting wide attention, and he is *the best physician*, who can not only properly diagnose the common everyday cases of malaria and typhoid fever, dysentery, pneumonia and so on, but he, I say, is the best physician who can properly diagnose and institute the proper line of treatment in those cases which are obscure and less common like appendicitis, like pus tubes, and like renal and hepatic calculi

In the large city, where the daily press is always on the lookout for news, prominent citizens are sometimes attacked with this disease, the papers take notice of it, and this occurring a number of times in the course of a year finally attracts the notice of the laity and they learn on inquiry from their family physician about the signs and symptoms and causes of this disease The general practitioner is frequently asked by his patients about this disease, and thus his attention is more vividly attracted, he is constantly on the lookout to detect it when he has cases with symptoms pointing to this morbid condition and will call in other physicians in consultation so as to be sure Hence, in a large city, few cases escape without being properly diagnosed Still, there are general practitioners who do not have it sufficiently impressed upon their minds, that *peritonitis means appendicitis* They are impressed with the idea that appendicitis virtually does not exist, and let me say right here, that I exclude pelvic peritonitis caused by pus tubes, or puerperal peritonitis caused by septic infection from the uterus I refer to the so-called idiopathic peritonitis, which is always caused by appendicitis—that is to say, in twenty-four times out of twenty-five and the twenty-fifth case is that exception, which always proves the rule In other words, ninety-six cases out of a hundred are caused by appendicitis, while four cases in a hundred are caused by perforation of the bowels from ulcerations, malignant growths, etc And if the general practitioner would only have *his mind sufficiently impressed with this one thing, that peritonitis is appendicitis*, I know he would be astonished at how much oftener he will find appendicitis than he ever thought possible If he will carefully inquire into the history in a vast majority of cases, he will find that they have had one or more previous attacks The attacks may have been slight, perhaps they were only laid up for a day or two with what they called colic, but on careful inquiry you will find that the patient had severe colicky pains in the right inguinal region, which is attributed to cold or indiscretion in eating, and be passed over without having consulted a physician Perhaps he has had a number of such attacks On careful examination, the physician will find that the patient has more or less pain over the whole abdomen, but that there is one excruciatingly painful little spot midway between the umbilicus and the crest of the ilium—the so-called McBurney spot

There may be tumefaction, generally not, because as a rule the appendix is behind and the cecum in front, containing more or less gas, so that no dullness on percussion can be detected Sometimes vomiting ushers in an attack, the fever is sometimes high and sometimes quite low, I have seen cases where perforation occurred with temperature over 99 5

It is only by being constantly on the lookout for this disease when you have cases of abdominal trouble that you detect it, slight cases will very often be overlooked

During the last six weeks I have had a few cases which might prove interesting

Case 1—Miss A, aged 25 first attack eighteen months ago She was laid up three months in bed, then two more slight attacks, then another attack last June, and finally took to bed until September, then again had another attack in February The sixth attack induced her to enter Harper Hospital and submit to an operation Operation was performed May 18, in the usual way The appendix was large and strictured at the junction of the cecum, not perforated, and was removed and the incision closed with buried kangaroo tendon, no drainage She was up on the twelfth day and has made a splendid recovery

Case 2—Mr W, aged 18, had an acute attack of three days' duration with temperature 103 He had had a slight attack four weeks previously, but this had been overlooked He was immediately taken in the ambulance to Harper Hospital and operated upon May 26 The appendix was ruptured in the middle but was walled in by exudate, it was removed, a gauze drain was used and a part of the incision closed with silkworm gut sutures Recovery uninterrupted

Case 3—Mrs L aged 21, has had four attacks and agreed to go to Harper Hospital Wednesday evening to be operated on Thursday Tuesday afternoon she was suddenly taken with a fifth attack and I had her immediately conveyed to the hospital in the ambulance and operated on that night, May 28 The appendix was very large, full of muco purulent fluid and on the point of rupturing in one place, where the mucous and muscular coat were ulcerated, no drainage Buried kangaroo tendon was used to close the incision She went home on the thirteenth day,

Case 4—Maud H, aged 10 first attack of ten days' duration, large tumor filled with pus She was taken to the hospital, the tumor simply opened and a large amount, (more than one half pint) of stinking pus was removed The cavity was cleansed and drained and the incision partly closed with silkworm gut sutures She made a splendid recovery and went home on the twelfth day This operation was performed on June 22

Case 5—Mr B, aged 30, was taken with appendicitis in April I saw him in consultation, but considered the symptoms so mild that no operation was deemed necessary, unless serious symptoms developed In a week or ten days he seemed to be all right, but was again taken with severe pain in the right side This would subside with hot applications and he would be around again for a day or two, and then have another attack, and so continued for two months I again saw him and pronounced it relapsing appendicitis I operated on him July 1 at St Mary's Hospital and found the case as stated Removed the balance of the appendix and closed the incision with buried kangaroo tendon except for about half an inch, where I left a gauze drain This was removed in forty-eight hours and a small rubber tube inserted He made an uninterrupted recovery

Case 6—Mrs W, is an unfortunate woman I had operated on her two months ago for pus tubes She went home and seemed all right for four weeks then began to have pain in the abdomen especially on the right side, her temperature ran up and came down again to about normal she became weaker and weaker and could retain no nourishment I was called in consultation and diagnosed appendicitis She was immediately taken to the hospital and I found the appendix large inflamed and adherent, but unruptured This was removed and the incision closed Operation July 2

These few cases and it is hardly necessary to say that I had none who died, or I would report them also, occurring within six weeks, will again make you wonder where we get them Some of these patients have come several hundred miles, and the territory covered by them embraces a population of two million or more And when I consider the number of cases operated upon by my colleagues, I am enabled to make the assertion I did at the opening of this paper, appendicitis is not so frequent as it is supposed to be, and still it is more frequent than many practitioners believe, as they never look for it

In resumé I would lay down the following rules

1 That the general practitioner with a good fair practice will hardly see more than one case a year on an average

2 That peritonitis always is appendicitis and will be readily diagnosed by every practitioner if he will only look for it

3 That all cases of appendicitis should be operated upon as soon as diagnosed, because the danger is almost *nil* before rupture, but after rupture even an operation will not always stay the progress of the septic condition

Of course, I admit that some cases will never recur, and if we operated on every case, we undoubtedly would operate on some cases that would get well without an operation, but we can not tell which case will recover and have no relapse, and which will not, and by waiting until rupture has occurred many cases will die which by prompt surgical interference would be saved

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SAVING LIFE OF CHILD DURING LABOR

Read before the Montgomery County Medical Society, September 1894

BY E W KEEGAN, M D
CRAWFORDSVILLE, IND

Napoleon asks the question, Is the route practicable? and the answer was, It is barely possible to pass The obstetrician may well ask, Is the way ample? is the pelvis of the mother normal? We may have any degree of abnormality to the most complete dystocia, compelling us to say it is impossible for a living child to pass It is generally believed an obstetrician's duty to perform Cæsarean section or symphysiotomy for the child's safety, knowing they are to day safe operations if the technique of their performance is observed, and the mother's life is less jeopardized than by any other method of delivery Theory has long held the view that, in making a sacrifice of life, that of the mother should be second to the child, nor can we expect professional support in declaring this a great injustice Does not the mother, as a rational being, enter the marriage relations with full consent and knowledge of the consequences that follow gestation and delivery? She so delivers her future for the intentions of marital life Why should we, as accoucheurs give consent to laws that do not equalize the relations between child and mother? Do you not see from the commencement of embryonic life the child is but as so much clay, shaped by the greatest sculptor, Nature's hand, whose nicety of touch and delicacy in outlining finishes and brings to birth the beginning of a being which has been proved to develop into the highest type of animal life, and should it not have the same consideration? Why, then, is it not as criminal to destroy the life of the child, as the mother, without resort to means for its life as well? It is sometimes considered justifiable to take life in self-defense, for it is not the mother who is supposed to destroy life but the accoucheur

We have now given us, by advanced science, desirable means of combating with the difficulties of years gone by, to where an amputation is no longer looked upon to be followed by gangrene and death Time has proved beyond doubt the effects of antiseptic surgery

Cæsarean section has lost much of its former magnitude When the dystocia is not so great, but sufficient to make impossible the delivery of a living child without unjustifiable compression of the head, we should resort to symphysiotomy, an operation attended with much less danger to the mother and general safety to the child Though an old operation, it has, in the past two or three years, under aseptic care, given brilliant results and will perhaps render Cæsarean section rarely necessary I will not make a general resumé of all accidents incurred in parturition, endangering the child's life The amplitude of the mother's pelvis deserves attentive consideration, but as the range of variance is so broad and conflicting when contrasted out of the lying-in chamber, I would advise a careful study of its anatomy and differential points when in attendance, for they have a certain individuality that only experience can give explanation of, where authors read so confusingly

Next in importance we note presentation In the vertex presentations we will first consider face anterior, which is considered very unfavorable in multipara but more so in primapara If an early diagnosis can be made and dilatation sufficient by placing the patient in an extreme Trendelenburg position, introducing the hand well up to the shoulder, rotating the body of the child with its head, avoiding undue force, we can convert a face anterior into a face posterior This is often facilitated by the patient lying on the side toward which the rotation is directed I use the same position for shoulder presentation, pressing the shoulder well up and with the hand externally carrying the child's head well over the superior strait and holding it in position until well engaged This treatment I learned from Dr M B Wright, of Cincinnati, many years ago and find it preferable to turning In presentation of the hand, the only alternative is to turn, bringing both feet down under full chloroform anesthesia, directing an assistant to hold the child well up, so that if the oncoming head does not pass readily, forceps can be applied and immediate delivery made It is culpable negligence to allow a child to perish for want of assistance, and no accoucheur should deny himself such aid as a physician can render when circumstances make it possible over any other In placenta previa it is generally preferable to tampon until dilatation is sufficient If the engaging head does not control hemorrhage, apply the forceps and make rapid delivery, immediately introduce the hand into the uterus and deliver the placenta, using friction to excite contraction If this does not check the hemorrhage, compress the abdominal aorta until the action of ergot, hypodermically, can be secured , small pieces of ice, injections of per sulphate of iron with peroxid hydrogen , in failure, the first can be used

In prolapsus of funis, many suggestions have been offered, all with little success In my experience the knee chest posture and the hand have given the best results governed by the circumstances of the case, and in no instance have I seen any of the appliances recommended of any avail As an oxytocic, I have found quinin valuable in increasing the uterine contractions, though not capable of inciting them If it does not increase the pains, in two or three hours apply the forceps and deliver In the use of them, I believe a suggestion of my own will be valuable to those making forceps delivery never make traction unless you have an assistant Make firm pressure laterally and over the fundus uteri, continuing the pressure until told to desist For this reason, I offer this suggestion it is known to every obstetrician that the pains subside spasmodically, doing so while traction is being made The uterus becomes relaxed and the child, in an effort to force the head from the forceps after the uterine pressure is taken off, breaks its neck, but by the observance of what has been given, such an accident is avoided In eclampsia, when dilatation is incomplete, I dilate either manually or instrumentally under anesthesia, delivering without delay, using all prophylactic means to guard against sepsis I regard the risk to the mother and child as materially lessened, for more children are lost during labor from dilatory procedure than through active interference You all know that if we wait several hours for dilatation, injury to the brain, convulsions, is generally fatal to both In a general summary of this paper, my desire is to impress upon you the point that a ready conception of, and ability to combat all or any of the emergencies occurring in the lying-in chamber, governed by calm judgment, quick action and mechanical ingenuity are the sequela of a successful accoucheur

NECROLOGY

George A Mursick, M D , died at his home in Nyack, October 17, of diabetes He was born in New York city in 1834, and was graduated from the College of Physicians and Surgeons in 1860 In January, 1863, he entered the Union Army as assistant surgeon He was promoted to be surgeon in charge of the General Hospital at Duvall's Cliff, Ark , in November, 1864 and became medical purveyor of the Department of Arkansas in April, 1865 He went to Nyack to practice in 1869 He leaves a widow and two sons

Adelbert F G Kuehn, M D , of New York city, died at his home October 22, of appendicitis He underwent an operation at St Mark's Hospital two days before Dr Kuehn was born in Pittsburg in 1852 He was a graduate of the School of Pharmacy and the College of Physicians and Surgeons, in class of 1892 He was a member of the Harlem Medical Association, and the New York County Medical Society He leaves a widow The place of interment was Wilkesbarre, Pa

J M Pride, M D , of Algona Iowa, October 18 ——E J Cook, M D , of Milwaukee, Wis , October 31, aged 76 ——D B N Fisk, M D , of Amherst, Mass , October 28, aged 53 ——Amos Fowler M D , of Albany, N Y , October 23, aged 76 ——W H Sedgwick, M D , of Granville, Ohio, October 25 ——T M Tilford M D , of Horse Branch, Ky October 27, aged 72 ——Joseph Daffron Schoales, M D , of Philadelphia, October 24, aged 53 ——J A Phillips, M D , of Pittsburg Pa , October 25, aged 63 ——Thomas F Young, of Brooklyn, N Y , October 26, aged 30 ——Francis W Gibson, M D , of Columbia, Mo , October 17, aged 32

Incorrect Opinions no Ground for Rescission of Settlement — The Supreme Court of Minnesota states, in the case of Nelson v Minneapolis Street Railway Company, decided May 24, 1895, that the plaintiff having presented a claim for personal injuries sustained by her while a passenger on its cars, the defendant employed physicians to go and examine her, and report to its claim agent as to the extent of her injuries The physicians had no other duty to perform, and this was the extent of their authority At the time of such examination, in response to plaintiff's inquiry whether they thought she was seriously or dangerously injured, the physicians replied in the negative, saying she would soon be all right again Afterward she settled with the defendant, and executed to it a full release and discharge, relying upon the statements of the physicians It subsequently developed that she was much more seriously injured than the physicians in their opinions expressed to her, but there was no evidence that these statements were not their honest opinions, given in good faith Under these circumstances, the court holds that the fact that the opinions of the physicians proved to have been incorrect, constituted no ground for a rescission of the settlement and release

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SATURDAY, NOVEMBER 9, 1895

THE PARASITES OF MALARIA

The literature upon the parasitic origin of malarial fever, though already very extensive, has received an important addition by the publication of a systematic study of the malarial fevers of Baltimore and its vicinity, by THAYER and HEWETSON,[1] assistants in the medical clinic of the Johns Hopkins Hospital

The study begins with a historical summary of the more important literature concerning the malarial parasite, and the table of references arranged in chronologic order at the end of the article shows that 359 separate works have been considered, all treating of some aspect or other of malarial fever since the recognition of its parasitic cause

The original portion of this article consists of a general analysis of 616 cases of malarial fever observed in the Johns Hopkins Hospital from June 14, 1889 to Jan 1, 1894 As regards the age of these patients, comparison with the ages of a similar number of non malarial patients, selected at random, at once shows the greater frequency of malarial fever among children and young adults This, the authors regard as probably due, not so much to a greater susceptibility as to the fact that the young adult is more exposed to malarial influences—remaining out of doors in malarial districts at night, etc There were about four times as many male as female malarial patients and this evident discrepancy is also explainable on the theory that the ordinary avocations of the men subject them to greater exposure than the women who, remaining in the house, are oftener spared

While the per cent of ordinary colored patients, taking the cases at random, was 12 2, the per cent of colored malarial patients was only 4 7, the figures tending to uphold the generally accepted view that the negro is much less susceptible to malarial infection than the white

As regards the season, it was found that while malaria may occur in any month of the year in Baltimore, yet nearly one half the cases were observed during the months of September and October In the majority of the cases the examination of the blood was conducted with the fresh specimen and it may be said without entering into any descriptive details, that the authors firmly believe that there are distinct varieties or types of malarial parasites which are not interchangeable but distinct varieties, though closely allied to one another, biologically combined infections, with parasites of different varieties may occur, but they are rare—less than 2 per cent of all the cases studied

Of the 616 cases studied by these writers, the type of the parasite was definitely differentiated in 542, and of these 150 were instances of single tertian infection, 188 of double tertian, 2 of single quartan, 3 of triple quartan, 188 were examples of infection with the aestivo autumnal parasite and 11 were instances of mixed infection with aestivo-autumnal and tertian parasites Further statistical tables show in an interesting manner, how the type of the infection becomes more and more severe as the summer and fall approach, thus, in the first half year only 5 aestivo-autumnal cases were observed, while in the last half 183 cases were observed, and as the seasons indicated advanced, the cases of double tertian infections also became more common

In the course of their studies the authors reach the conclusions that the tertain type of fever depends on the presence in the blood of a parasite that passes through its cycle of existence in about 48 hours The segmentation of this organism, at intervals of about 48 hours, is always associated with a febrile paroxysm Frequently, owing to the presence of two sets of organisms, there are quotidian paroxysms Quartan fever, rare in Baltimore, depends on a blood parasite that undergoes segmentation which is associated with a febrile paroxysm every 72 hours Double or triple quartan infections are possible In regard to the aestivo-autumnal fever they conclude that it is due to the organism described by MARCHIAFAVA and CELLI, but that the cycle of existence of this parasite has not yet been followed out in an entirely satisfactory manner, it probably varies from 24 hours or under to 48 hours or more, the main seats of the infection with this organism are, apparently, the spleen, bone marrow, and other internal organs, but few stages of the development of the parasite being ordinarily found in the peripheral circulation This organism causes fevers that vary greatly in their manifestations There may be quotidian or tertian intermittent fevers, or, more commonly, more or less continuous fever with irregular remissions

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[1] The Malarial Fevers of Baltimore Johns Hopkins Hospital Reports, Vol V, 1895

While Thayer and Hewetson reach reasonably definite and apparently sound conclusions as regards the distinctness of the various types of material parasites and their relations to the clinical forms of malaria, yet they have to point out that the nature and the relations of certain bodies observed in the blood of malarial patients are still, in their opinion, undetermined This is especially true as regards the nature of the flagellate bodies which may develop in all types of malarial fever, concerning their nature and relations nothing definite is yet known It also appears that certain crescentic bodies, associated with the aestivo-autumnal parasite, are not yet thoroughly understood

Concerning the treatment of malaria the authors had abundant opportunity to observe that the specific action of quinin upon the three varieties of the parasite is indeed undoubted Quinin exerts this remarkable influence most strongly when the parasite is undergoing the process of segmentation and before the fresh segmented forms have had time to enter into new red blood corpuscles It is consequently best administered, then, just before the beginning of a paroxysm, if we wish to obtain the greatest effect with a single dose The specific action of quinin is much more rapid and certain in the tertian and quartan fevers than in the aestivo-autumnal infections

ABDOMINAL vs VAGINAL HYSTERECTOMY

The technique of hysterectomy has been so much improved of late years that the operation which was during the first quarter of the century not accepted as a legitimate one by the majority of surgeons, has now been admitted to be a standard operation, and in suitable cases an imperative one The method of performance of hysterectomy is now under discussion, and those practicing that branch of surgery termed gynecology, seem to be divided into two opposing camps, one favoring the abdominal method of extirpation of this much suffering organ, and the other the method through the vagina As in many other questions raised by specialists, it must be settled on the general principles of the branch in which it is included, and it would seem as if there were no necessity for acrimony of debate on this subject if we could once agree as to the facts, and if it shall be proved by careful statistics that one method is safer than the other, so far as its immediate effects are concerned, that it is as thorough, so far as the remote effects of recurrence of the disease for which the operation is performed are concerned, then there should be no question as to the adoption of that particular method

And just here authorities differ as to which is the safer method We may easily exclude all of those cases of enormous fibroids in which the uterus and its attachments are too large to be removed through the vagina, as nobody would think of performing vaginal hysterectomy in such cases, but in those cases in which we have a carcinoma involving the cervix or body of the uterus, in which there is no undue enlargement, it seems reasonable to suppose that if by the process of enucleation, a smaller wound and reduction of the liabilities to infection, we can remove the uterus through the vagina, there should be equal promptness in accepting that operation But the truth is is that each case must be decided on its own merits and the particular characteristics of the case In cases of fixation of the uterus and where the adjacent pelvic glands are seriously involved, it is obvious that the vaginal route does not afford access to all the diseased tissues, and that the mere removal of the uterus by enucleation is inadequate for the removal of the disease The vaginal route, too, lest extreme care be taken, is much more liable to convey infection into the general cavity than a clean abdominal incision under the usual aseptic precautions, and a careful study of the papers presented by the respective disputants would seem to resolve themselves into the proposition that as cases differ so must the treatment differ The knights of old fought about the shield whose surfaces were of gold and silver Each looked on the side next to him and affirmed the shield to be gold or silver, as the case might be, and they were both right and both wrong And so the surgeon who does not recognize and appreciate that his choice must be guided absolutely by the nature of the case and the conditions then present, is liable to be sometimes right and sometimes wrong

Dr Levi Cooper Lane of San Francisco, Cal, first performed vaginal hysterectomy in this country in 1879 (*Pacific Medical and Surgical Journal*, 1879, vol xxi, p 489) Dr H A Wrisberg of Gottingen, excised the uterus through the abdomen in 1787

COMPLETE EXCISION OF PATELLA

In the *Provincial Medical Journal* are reported two cases of complete removal of the patella, and reference is made to three other cases Dr Kummer of Geneva, has reported the following data in the case of a female aged 25 years, with primary tuberculosis of the right patella, but with a perfectly intact knee-joint in which he made excision of the bone with excellent results Two months after the operation, the patient was able to extend her right lower limb as under normal conditions, would kneel with perfect freedom, and without any pain or discomfort Could walk four or five hours daily without lameness or fatigue, or run down staircases with ease, etc In short, the only inconvenience caused by the absence of the knee-cap consisted in a relatively weakened extension of the corresponding limb

"There can be no doubt," says DR KUMMER, "that in suitable cases, a total extirpation of the patella can be performed without impairing the patient's gait, or markedly interfering with movements of the knee joint The operation is indicated in cases of *tubercular osteitis of the patella, provided the articulation remains yet intact* Extirpation can actually prevent the development of articular lesions, and thus save the knee-joint, provided the operation is resorted to sufficiently early In cases of tubercular osteitis of the knee-cap, total removal of the bone offers better chances in regard to recovery than scraping out the morbid foci"

Another successful case is that of DR KAUFMANN, reported in the *Correspondez-Blatt für Schweizer Aerzte* The patient, a married lady, aged 33, was suffering from fungoid osteitis of the left knee-cap, of eight years standing A month after the operation, she, being frightened by a fire next door, tore off all the dressings and ran out of the house, having swiftly descended a staircase Since then her knee-joint has been perfectly movable and her gait normal DR KUMMER mentions two other cases of primary tubercular osteitis of the patella in boys, in which the whole of the bone was removed by PROFESSOR KOCHER of Berne An interesting case of total excision of the patella for acute necrosis has also been published in the *Lancet*, by MR FREDERICK PAGE of Newcastle-on-Tyne The patient recovered, with a perfectly useful limb

THE PATHOLOGY OF IDIOCY

HAMMARBERG ("Clinical and Pathologic Studies concerning Idiocy, with Investigations into the Normal Anatomy of the Brain Cortex," Academic Thesis, Upsala, 1893) who unfortunately died from the effects of appendicitis at the very beginning of a most promising career, reaches the following conclusions after a thorough and elaborate examination of the brain cortex of a number (nine) of idiots in all the cases, which include the principal forms of idiocy, it was possible to explain the psychic defects as due to a lack of cortical nerve cells capable of normal functions

This absence of normal cells was found to be due, either to an arrest of the development of a greater part of the cortex at a stage corresponding to the embryonal, or to that found in early infancy, or to the actual destruction of cells during the growth of the brain In all cases it is made clear that at a certain time the normal development of the cortex became arrested

The degree of idiocy is shown to depend upon the intensity of the acting cause, upon the extent and the functions of the cortex involved, and upon the time at which the arrest in development occurred It is also demonstrated that certain abnormal cell forms as well as peculiarities in the arrangement of the cells in the cortex, which have been regarded as characteristic of the idiot, merit only a secondary importance The essential moment in the production of the psychic defects of idiocy is the lack of cells capable of *function*

In addition to the usual methods, HAMMARBERG relied essentially upon a method of his own, by means of which he was able to determine with exactness the actual number of nerve cells in a cube of brain cortex 0 1 mm in size, and before drawing any conclusions as regards the cortex of idiots, he carefully examined the cell arrangement, number, size and structure in the various layers of the normal cortex Preliminary investigations demonstrated that fixation and hardening in alcohol, cleaning in xylol, and embedding in parafin resulted in the least actual artificial changes which were also constant in different brains and in different parts of the brain cortex The pieces were then cut into serial sections, fastened on the slide and stained with methylene blue according to NISSL's method Counting of the cells in the various layers of the cortex was made by throwing the positive picture of a glass slide ruled into squares upon the preparation under the microscope in such a manner that by means of an objective micrometer each space in the field was made to accurately measure 0 1 mm square The cells present in the same number of squares in ten serial sections, all of which were 10 μ thick, were then counted and the sum, divided by the number of squares counted in each section, would equal the number of cells in a cube of 0 1 mm of cortical substance

NEW REGULATIONS FOR PRACTICE OF DENTISTRY IN NEBRASKA

An almost entirely new law has been passed in Nebraska, regulating the practice of dentistry First of all, it requires that a certificate therefor shall be obtained from the State Board of Health and recorded with the clerk of the county in which the dentist is to practice In the discharge of its duties, in this connection, the board is to be assisted by three secretaries whom it shall appoint from a list recommended by the State Dental Society These secretaries will conduct the examinations provided for, a part at least of which examinations must be in writing and remain in the hands of the secretaries, open to the inspection of any and all persons for one year But a graduate from a reputable dental college or university may, on presentation of his diploma and affidavit that he is the lawful possessor of the name, be given a certificate to practice if he shall, upon investigation of the diploma and affidavit, be found entitled to practice

The term, "reputable dental college or university," is to be defined as dental college or university requiring a preliminary examination for admission of its course of study and which requires as requisite for the granting of a dental degree, attendance on at least three courses of lectures of six months each, no two of said courses to be held within one year, and having a full faculty of professors in all different branches of dental education, to-wit anatomy and oral surgery, physiology, chemistry, materia medica, therapeutics, operative dentistry and prosthetic dentistry and clinical instructions in the last two named *Provided*, that this three year clause shall not apply to degrees granted prior to July, 1892

Any person shall be regarded as practicing dentistry within the meaning of this act, who shall profess to or perform any operation usually considered as belonging to the practice of dentistry *Provided*, that nothing in this act shall be so construed as to prevent physicians or surgeons from extracting teeth *And provided*, that *bona fide* students in dentistry shall be permitted to perform operations under the immediate supervision of their preceptor If, for such operations any fee or compensation be received, either directly or indirectly, then such person shall no longer be considered a student and he or she shall conform to all the provisions of this act

Certificates shall be refused to persons guilty of dishonest and dishonorable conduct, and they may be revoked for like causes But the person must first be given an opportunity to be heard in his or her defense

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION

Among the active, progressive and special associations of this country, the Southern Surgical and Gynecological Association takes a high rank The excellence of its scientific work, year after year, has attracted marked attention both at home and abroad This Association will hold its eighth annual meeting in the Hotel Shoreham, Washington, D C, November 12, 13 and 14, under the presidency of Dr Louis McLane Tiffany, of Baltimore Thirty-seven papers are listed to be read, many of the authors of which are men of national reputation, whose contributions to gynecological and surgical literature have reflected luster upon the profession

The Washington Obstetrical and Gynecological Society will give the Association a banquet on the first evening of its meeting On the evening of November 13, Dr Joseph Taber Johnson will tender the members and their guests a reception at his residence

The Journal of the American Medical Association, as usual, will publish a fair abstract of its proceedings

Dear Doctor —Please direct the attention of your friends to *our* Journal *We will be pleased to send sample copies* to any names you may suggest

CORRESPONDENCE

Ectopic Gestation

Toledo, Ohio, Nov 1, 1895

To the Editor —Dr D von Ott at Petersburg, in Russia, has *recently published his clinical and experimental observations* concerning ectopic pregnancy Of the most importance for the practitioner I consider his thoughts regarding therapeutics, and therefore I wish to lay out his conclusions

Wherever the diagnosis of an uninterrupted extra-uterine gestation is positively made, the extirpation of the ovary by laparotomy is indicated If the patient has reached the second half of pregnancy, we may, if the mother demands it, delay operation until the fetus can be considered able to live, although great dangers are connected with this risk

If pregnancy is advanced to first and second months only, and the further development now stopped, that means if the fetus is dead, we may restrict our therapeutic action to close observation of the patient If gestation is farther advanced and the fetus dead, extirpative treatment is still allowed, although the prognosis is less favorable and although the final cure demands rather a long time A relative indication for operative interference, we therefore find here also, which in general should be preferred Even if the extra uterine pregnancy does not offer any alarming symptoms, as hemorrhage or acute inflammation, which naturally would demand operation, it very often interferes with the welfare and health of the woman Extirpation four to six weeks after death of fetus should be done, if there is no tendency to quick resorption At this time the placental vessels are obliterated, which condition does away with the danger of hemorrhage

If the ovum is not removed, resorption should be favored by massage and electricity, carefully applied

Hematocele, produced by ectopic gestation, should be removed by laparotomy, because this is the only way to satisfactorily remove the condition In case of suppuration and putrefaction, the operation should be made from the vagina

The results of the author are good ones, in twenty one laparotomies one death which is a mortality of 4 8 per cent

B Becker, M D

Pan-American Medical Congress, and the Journal

Colorado, Texas, Oct 30, 1895

To the Editor —I see in Journal just received, notice of "*Transactions of the First Pan-American Medical Congress*" recently published I was a member of the Congress from Texas, and paid $10 dues Am I entitled to copy, because of this fact, or will I have to buy it?

I congratulate you on your signal success in the management of the Journal It is now in every respect the equal of any published, and may you stay with it

Very truly yours,
P C Coleman, Pres T S M A

Answer —The copy reviewed by the Journal was an advance copy sent by President Pepper for notice We have no doubt the members will receive their copies in regular course of distribution Thanks for words of encouragement

A Western Opinion of the Journal

FROM ONE OF THE STATE BOARD MEDICAL EXAMINERS

Denver, Colo, Oct 15, 1895

To the Editor — Let me congratulate you upon the great improvement in our Journal recently I feel sure that its tone comes more nearly meeting the approbation of the part of the profession which it should reach, than if gotten up in more popular "crossroads" style

Yours very truly, J N Hall, M D

BOOK NOTICES

Pioneer Work in Opening the Medical Profession to Women Autobiographical Sketches, by Dr Elizabeth Blackwell Cloth, pp 264 London and New York Longmans, Green & Co 1895

This book is unique, because it is the autobiography of one of the leaders of the movement by which women were admitted to the general medical profession Indeed, we might say the leader, for Dr Blackwell was the first woman admitted as a student to the general classes in medicine, the story of which is told in the appendix to this work in a very interesting manner by Dr Stephen Smith, of New York While women were freely admitted to practice obstetrics and gynecology, as did Louise Burgeois and Madame La Chapelle yet they were kept aloof from general medicine and surgery until the opening in our day to women of medical classes and the establishment of medical colleges exclusively for women The story of her early years while earning money for study and studying in America, takes up the first three chapters Chapter iv is given to the story of her study in Europe, its difficulties and trials Chapter v to her practical work in America Chapter vi, a revisit to England and the return to New York, and the last and seventh chapter her final return to England

As the period of medicine covered in this autobiography from 1821 to 1869 is among the most interesting in the history of medicine, so this book, which gives occasional curious glimpses of interviews with the great men who occupied prominent positions in the earlier half of the century, is full of interest In our day we can hardly imagine the annoyance, not to say insults, that the woman medical student was compelled to submit to in order to gain a medical education, and one can only wonder in reading the book of Dr Blackwell at the patience, the endurance, and the single heartedness which enabled her to complete her course, at the same time, it is seen that among the many rebuffs which were encountered were many pleasant experiences which had, we suppose, a soothing effect under the irritating influences to which she was frequently subjected Now that woman has come into medicine to stay, we trust that she will not forget that the men have practiced medicine and have gained honor and success in its practice, not because they were men but because they were thoroughly equipped in the great principles of an honorable profession, and if women succeed everywhere in this calling it will be in exact proportion as they thoroughly equip themselves for the business, rather than because they are women

One beginning the book is hardly likely to lay it down until it is finished The anecdotes told are interesting, and among them is the following (pp 194 and 195) "My first medical consultation was a curious experience in a severe case of pneumonia in an elderly lady I called in consultation a kind-hearted physician of high standing, who had been present in Cincinnati at the time of my father's fatal illness This gentleman, after seeing the patient, went with me into the parlor There he began to walk up and down the room exclaiming 'This is a most extraordinary case Such a case never happened to me before Really, I do not know what to do' I listened to him with surprise, although he was very much perplexed, as it was a clear case of pneumonia, and had no unusual degree of danger, until I at last discovered that this perplexity related to me, and not to the patient, and the propriety of consulting with a lady physician I was both amused and relieved I at once assured my old acquaintance that it need not be considered in the light of an ordinary consultation, if he were uneasy about it but as a friendly talk Finally, he gave me his best advice, and my patient rapidly got well Happily enough afterward, I had no difficulty in obtaining necessary consultation from the members of the medical profession"

Functional and Organic Diseases of the Stomach By Sidney Martin, M D, F R S F R C P, etc, with 57 illustrations Cloth, 498 pages Edinburgh and London Young J Pentland Philadelphia J B Lippincott Company 1895

The English teachers have always had a high standing as physiologists, and have excelled in it as the Scotch have excelled in pathology, and we have no hesitation in saying that since the famous books of Thomas King Chambers, no book dealing with stomach digestion and its derangements and the lesions of the organ itself has been more complete or more thorough in its treatment of the subject The typographical execution of the work is excellent, and the illustrations are all good, and some of them very fine The book is divided into sixteen chapters, as follow i Anatomy and Physiology of the Stomach, ii, Digestibility of Various Articles of Diet and the Effect on Digestion of Food Exercise, as Condiments, Alcoholic Drinks, Tea, etc, iii, Pathology of Indigestion of Food, iv, Pathology of Indigestion of Food Continued, v, Methods of Examination of the Functions of the Stomach in Disease, vi, Symptoms Referable to Indigestions of Food with or without Anatomic Changes in the Walls of the Stomach, vii, Functional Disorders of the Stomach, viii, Mechanical and Active Congestion of the Stomach, Gastritis, Gastric Catarrh, ix, Gastritis Toxica, Gastritis Mycodica, Atrophy and Degeneration of the Stomach, x, Treatment of Acute and Chronic Affections of the Stomach, xi, Treatment of Acute and Chronic Affections of the Stomach Continued, xii, The Same Continued, xiii, Bleeding from the Stomach, Hematemesis, xiv, Dilatation of the Stomach, Cirrhosis Ventriculi, xv, Ulcer of the Stomach, Acute and Chronic, xvi, Cancer of the Stomach

While the treatment by electricity and hygienic measures are noted, nothing whatever is said of the operative treatment in cases of carcinoma or tumors of the stomach, the work being confined to the medical aspects of the subject

Text-book on Forensic Medicine and Toxicology By Arthur B Luff, M D, B Sc, London Lecturer on Medical Jurisprudence and Toxicology, St Mary's Hospital, Examiner in Forensic Medicine, University of London, External Examiner of Forensic Medicine in the Victoria University, Official Analyst to the Home Office London and New York Longmans, Green & Co 1895 The work consists of two volumes, pp 416 and 360 respectively

This work has been written as a text-book for students of medicine, and as a work of reference for practitioners in connection with medico legal cases Special reference is given to toxicology There are twelve full-paged plates and twenty-four illustrations in connection with the toxicologic branch of the subject The contents of the volume are as follow Chapter i, Medical Evidence, Importance of Knowledge of Medical Jurisprudence, Dying Declarations, Procedures in Magistrate's Court, Coroner's Court, Court of Assize, Attendance of Witnesses, Common and Expert Witnesses, etc Chapters ii, iii, iv, v, vi and vii are devoted to questions connected with the dead body Chapter viii, the general subject of toxicology, and ix, x, xi, xii and xiii to inorganic poisons, Chapters xiv, xv, xvi, xvii xviii, xix, xx, xxi, xxii, xxiii and xxiv to organic poisons The book is well printed and the illustrations are excellent The tests given are those recommended in the latest works on chemistry, and many of the procedures are drawn from the personal experience of the author In examining the book we are inclined to think that the portion relating to toxicology would be of most interest to the American profession, as the procedures of the English courts differ in many important respects from those prevailing in this country However, the general principles of the English common law prevail in this country in the absence of any statutory provision We commend the work suited to practice Dr Ransom gives details of his experiments in which he obtained from virulent cholera cultures a fluid free from bacteria and equally fatal to guinea pigs, and then a dry, stable substance having the same power Then guinea pigs, etc, were treated according to known methods of immunization to obtain an antitoxin Serum from these animals was found to afford protection to guinea pigs receiving injections of the cholera toxin, even when the dose was made three times the ordinary fatal amount, and alike whether the dry toxin, the clear solution from cultures or the living vibrios were used, and even when the toxin was used 48 hours after the antitoxin Dr Ransom gives a resumé of his researches as follows 1, it is possible to obtain a cholera culture fluid, free from bacteria, which shows specific qualities, 2, the post mortem appearances which result from this fluid are similar to those which follow the use of living cholera vibrios, 3, from this fluid can be obtained a stable substance the action of which is identical with that of the original fluid, 4, from animals susceptible to cholera, which have been treated with cholera toxin, a serum can be obtained, which proves to be equally effective against cholera toxin and against the living cholera vibrios —*Deutsche Medicinische Wochenschrift*, July 18, 1895

Congenital Syphilis and Tuberculosis —Hochsinger (*Wiener Med Blatter*, 1894, Nos 20 and 21), concludes that syphilis and tuberculosis can appear as a mixed infection at the earliest possible age, and that this infection may be congenital This conclusion is based on the clinical and anatomic investigation of three cases The first child born of a syphilitic father and a tuberculous mother died on the thirty-first day During life an undoubted syphilitic cutaneous eruption existed, and a simultaneous pneumonia with enlargement of the spleen and the liver led to the diagnosis of syphilis The post-mortem examination showed an extensively distributed tuberculosis of the internal organs with large and caseous nodules that contained the tubercle bacilli The second case concerned a child that died on the thirty eighth day The history, the syphilitic eruption, and a pneumonia seemed to warrant the diagnosis of syphilis The lung was the only tuberculous organ in this case The third case presented pronounced syphilitic lesions and died during the sixteenth week from pneumonia The section showed a chronic tuberculous broncho-pneumonia, tuberculosis of the spleen, of the lymph glands and interstitial syphilitic hepatitis without tuberculosis of the liver Hochsinger regards such cases as not uncommon and lays stress upon the necessity of examining the contents of the nodules for bacilli, in order to determine whether syphilis or tuberculosis is present The question whether the tuberculosis was congenital or acquired in these cases can not be determined in Cases 2 and 3 Of the first case it may be said with certainty, however, that the syphilis was the result of a spermatic or paternal infection and that the tuberculosis was due to a placental infection, because the caseous masses with tubercle bacilli in the liver speak in favor of infection through the umbilical vein

Goitre Among the Indians of the United States —First Lieutenant and Assistant Surgeon Munson, U S Army, contributes an interesting and timely article concerning the prevalence of goitre among certain Indian tribes[1] Munson obtained a great deal of information in regard to this subject by means of a series of questions sent to the physicians of the sixty-three agencies of the Indian service, all of whom responded except three It was found that the number of Indians located on reservations from which goitre was reported amounted to 77,173, and that among this number there were 1,823 cases of bronchocele or about 2 36 per cent, taking into consideration the population of all the reservations from which positive as well as negative reports were received the percentage would be 1 23 As regards geographic distribution the disease is most prevalent in the southern part of Montana There seems to be no question but that racial predisposition to goitre is illustrated by the Indians because the disease was reported as practically unknown among the white settlers living in or about the reservations where goitre was prevalent among the Indians It seems also that fully 80 per cent of the cases occur in Indian females, the disease being not only much less frequent but also less rapid and less extensive in the male The average age for the disease to begin was found to be at from 12 to 14 years Nearly every report gives instances illustrating the apparent heredity of goitre and many instances are cited in which several consecutive generations showed its development It is very interesting to observe that only one case is reported in which goitre was associated with cretinism The following are some of the other salient points of this article goitre among the Indians can not be traced to high altitude, climate or water containing an excess of calcium salts, the disease is undoubtedly caused by unsanitary surroundings, depressing constitutional conditions, and an improper and excessively nitrogenous diet, the tumor is apparently smaller than the one usually observed in whites, the usual treatment is not satisfactory

The Diagnosis of Syphilomata —How are syphilitic sarcomata and lymphomata to be distinguished anatomically and clinically from other sarcomata and lymphomata? (v Esmarch at the Twenty-fourth Congress of the German Society for Surgery, April, 1895) It is a well-known fact that tumors often appear, which are due to constitutional (acquired or inherited) syphilis and which disappear after appropriate internal treatment, but since they can be easily mistaken for other malignant tumors (sarcomata, carcinomata), they often lead to unnecessary operations In his own practice more than forty cases had appeared, in which tumors, at first regarded as malignant sarcomata or carcinomata, were shown to be undoubted syphilomata And he has found a far larger number in print, which, in the light of his present experience, he might stamp as suspicious In this light he would regard 1, all cases of tumors in patients who showed at any other time symptoms of syphilis, or where the history showed that their parents or brothers or sisters had had syphilis, 2, all tumors, resembling sarcomata, which develop in voluntary muscles, especially in the sterno-mastoid, in the muscles of the abdomen, the back and the lower extremities, also the tongue, 3, all sarcomata, which, after complete extirpation, recur at first slowly, then after shorter and shorter periods (recurring fibroids, Paget), 4, all tumors, which diminish or disappear after use of iodid of potash, mercury and arsenic, 5, those sarcomata which disappear after attacks of erysipelas or after injections of the toxins of erysipelas, etc All these grounds for suspicion are strong points in the clinical diagnosis, and the more of these coexist in a given case, the more probable it is that the tumor is of syphilitic origin, the more cautious must the surgeon be, before he determines upon an operation, the more searching must be the examination of the whole body and of the clinical history In this way it is not rarely that one finds a clue (eruption, ulcers, cicatrices, teeth, eyes, etc) The external appearance of the tumors and the manner and duration of their growth are so varied that no diagnostic signs can be drawn as a rule From the anatomic appearance (after extirpation, or removal of a portion) a diagnosis can at times be made at a glance, if one finds in the section the strikingly mottled picture which Virchow has so excellently described The microscope also discloses much of value, especially negatively But in many cases syphilomata can not be distinguished, macroscopically or by the microscope, from small-celled and spindle celled sarcomata The same is true of exuberant granulomata which sometimes arise from broken-down gummata But the greatest difficulties in diagnosis are seen in syphilitic lymphomata, which appear, especially as a late symptom, in inherited syphilis, and which are often confounded with tuberculous or pseudo-leucomatous, malignant lymphomata and lymphosarcomata Syphilomata arise also in other glands, especially in the mamma, testis and salivary glands, and are generally not recognized before extirpation Inasmuch as all these tumors recur after increasingly shorter periods, until the patients at last succumb, it would be of inestimable value to us, if we had some means, at least by the microscope, of deciding whether the tumor was due to syphilis or not That we have to do with bacilli or similar organisms (protozoa) in syphilis we feel reasonably sure from the manner of infection and the whole course of the disease But unfortunately the labors of investigators, from Lustgarten to Döhle, have not succeeded in establishing beyond doubt that the microörganisms found are the cause of the infection or are present in all products of syphilis —*Centralblatt für Chirurgie*, July 6, 1895

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[1] New York Medical Journal, Oct 26, 1895

The Pathologic Anatomy of Progressive Muscular Atrophy —Cramer, of Gottingen, presents a thorough review of the literature of the anatomic changes in the various forms of progressive muscular atrophy (*Centralblatt fur Allgemeine Pathologie u Pathologische Anatomie*, vi Band, No 14–15) He divides all the cases into the following groups 1, cases without any changes in the central or peripheral nervous system, 2, cases with changes in the peripheral nerves only, 3, cases presenting lesions in the spinal cord, 4, cases with alterations in the brain and he gives tables embodying the essential facts recorded concerning all the reliable and complete cases of each group published in the literature

His final conclusions after a careful consideration of all the instances are the following 1, there are muscular atrophies in which the present means of investigation fail to disclose any lesions whatsoever in the central or peripheral nervous system, even after the atrophy has existed for ten or twenty years These atrophies correspond clinically to some one of the forms which Erb includes under the name of dystrophy, 2, the muscular atrophies that develop in connection with demonstrable spinal affections present many different clinical pictures The same complexus of symptoms which is characteristic of dystrophy, as well as typical spinal muscular atrophy may develop in conjunction with the same spinal lesion Even an isolated disease of the ganglion cells in the anterior horns may give rise to such widely differing clinical manifestations *A special lesion may consequently* be present in cases of dystrophy or the peripheral and central nervous system may be found intact, 3, there are found transition forms between the cases without central or peripheral lesions and those with spinal affection, as well as between the so-called spinal muscular atrophies and the atrophies that develop in connection with other diseases of the spinal cord, 4, the changes in the muscles themselves are practically and, on the whole, identical in the atrophies with spinal cord lesions and in the myopathies without central changes The microscopic changes in the muscles present nothing that is characteristic of any single form of the disease, 5, the pathogenesis of muscular atrophy is not clearly understood. It appears, however, that an embryonal disposition that may become hereditary must be taken into consideration as an etiologic factor Whether this supposed pathogenic factor that comes into play in embryonal life attacks the nervous system or the musculature directly has not been determined, 6, there are cases of muscular atrophy with an isolated disease of the peripheral nerves which seem to assume an especial type (the neural form of Hoffmann) The muscular changes in this form do not present any essential differences from those of the two other kinds of atrophy mentioned, 7, the muscular atrophies of locomotor ataxia show some similarity to the neural form, 8, there are muscular atrophies dependent upon central lesions which mostly consist of focal changes in the region of the central convolutions Such muscular atrophies can develop without any visible morbid changes in the pyramidal tracts or in the ganglion cells of the anterior horns

Treatment of Eclampsia —By Prof Dr A v Gurbaroff, of Jurjew (Dorpat) Since the treatment of eclampsia even to day scarcely permits us to expect favorable results, inasmuch as the death rate for the mother is placed at 25 per cent (Auvard) or even 30 per cent (Ahlfeld), the following observations on the six cases of this severe complication, which have been observed since my entrance into the woman's clinic in this city, seem to me to be not without practical interest, since all these cases terminated favorably for the mother This would lead us to assume a mortality of zero, and I scarcely think it could be shown that the result obtained did not depend upon the treatment Of the six cases, three presented very severe phenomena, as very *high and long continued temperature, protracted comatose* condition, large amount of albumin in the urine, frequent convulsions, etc The treatment was as follows administration of narcotics, principally morphin, in moderate but repeated doses (015 gm subcutaneously about six times in twenty-four hours according to the quantity of urine), enemata of chloral and only during operative maneuvers (including catheterization of the bladder) light chloroform narcosis All external means which could stimulate or supply vicariously the activity of the skin, were applied freely Among these, warm baths only very seldom, moist, warm coverings always, further, many times a day, rubbing with warm vinegar-salt-alcohol solution and simple supplying of heated air In all cases, attention was given as early as possible to securing thorough emptying of the intestines by salines (sodium and magnesium sulphates, āā) Beside, in all cases, great attention was bestowed on the function of the kidneys This was stimulated by the administration of milk and certain mineral waters, and by application of local heat to the region of the kidneys by means of a large hot water bag, which always exerted a remarkably favorable influence on the secretion of urine Especially in the three severest cases, in which there was entire loss of consciousness, coma, with high temperature (39, 40 degrees C), and greatly diminished secretion of urine, the quantity of urine was strikingly increased and the albumin much diminished, coincidently the general condition began to improve and recovery followed after a few days This result appears to me so exceptional, that I feel justified in recommending strongly the continued local application of heat over the loins, especially in cases in which there is much albumin and markedly diminished secretion of urine Venesection was employed in only one of these cases In this case convulsions began at the end of the seventh month and were very severe The patient was brought into the clinic in a deplorable condition The eclamptic seizures followed one another rapidly and in the intervals the patient was wholly unconscious Temperature 38 to 39 degrees, pulse 90 to 112 The os admitted one and one-half fingers, no contractions of the uterus Abortion was produced Barnes' dilators were introduced and after four hours the sac was ruptured and a dead child was delivered with forceps The convulsions continued Pulse 90, strong, respiration labored and stertorous Unconsciousness persisted After eight hours 600 gms of blood were drawn from the left median cephalic vein The paroxysms suddenly ceased, respiration improved, there was an increase in the urine and marked diminution in the albumin Temperature before venesection 38 5 degrees, pulse 76, shortly after 37 8 degrees, pulse 80 On the next day 500 gms more of blood were drawn Soon after the patient became perfectly conscious Albumin disappeared from the urine On the fifth day symptoms of puerperal mania were manifested, joined with rise of temperature, but these soon passed away —*Centralblatt für Gynakologie*, No 5, Feb 2, 1895

The General Therapeutic Effect of the Alternative Electric Current of High Frequency and of High Tension —Dr Apostoli, together with Dr Berlioz, on March 18 1895, presented a paper on the above mentioned subject to the Academy of Sciences of Paris He now, after longer and riper experience, desires to present a summary statement of his general conclusions

1 *According to Professor d'Arsonval's discoveries*, alternative currents of high frequency and of high tension, exert a powerful action upon all living bodies submitted to their inductive influence

2 The best method of applying these induced currents is to place the patient, free from all contact with electrodes, in the circuit of a large solenoïd traversed by these currents The patient being thus completely insulated, the currents which circulate in his body by auto-conduction, have their origin in his tissues The body plays the role of a closed induced circuit

3 By this method the physiologic discoveries of Professor d'Arsonval are confirmed and we are able to prove the powerful influence of these currents upon the vasomotor system—although they produce absolutely no sensation and although they have no apparent effect upon the motor or sensory nerves These currents have nevertheless a powerful action upon all the nutritive functions, as has been verified by Dr d'Arsonval's numerous analyses of the gaseous

products of respiration and by Dr Berlioz's not less numerous analyses of the urinary excreta

4 The general therapeutic applications to be deduced from this physiologic action are confirmed by clinical observation Dr Apostoli has now treated more than a hundred patients by this method at his clinic and at his private consultation rooms The greater number of these patients have been greatly benefited by this new treatment, which, be it remarked, has been used to the exclusion of all other forms of medication, dietetic or otherwise

5 The currents exert in the majority of cases a most powerful and generally beneficial action upon diseases due to slackening of the nutrition, by accelerating organic exchanges and combustion This is proved by analyses of the urine made by Dr Berlioz, of which the following is a brief resumé

The quantity becomes more normal, the products of organic waste are better eliminated The increased combustion is shown by the diminution of uric acid, while the percentage of urea is generally increased The relative proportion of these two substances changes under treatment so as to reach in general the figure of 1–10 The elimination of the mineral products is also changed, but in a manner less marked.

6 When daily séances are given, each lasting fifteen minutes, we may generally observe in patients submitted to the influence of these currents the following modifications in their general condition We mention them in the order of their occurrence return of sleep Increase of strength and vital energy Increase of gaiety, of power for work and ability to walk Improvement of appetite, etc In short, general progressive improvement This general improvement often manifests itself after the first séances before any local influence is apparent and before any change has occurred in the urinary secretions

7 Local pain and trophic changes are often more slowly affected by these currents and at times they are entirely refractory for a longer or shorter period In such cases the same currents must be applied locally by contact with the electrodes This subject will be treated later on in a separate communication

8 The diseases which have appeared incurable by this treatment are those not associated with well defined organic changes such as hysteria and certain forms of neurasthenia Dr Apostoli has also observed that certain localized neuralgias are refractory to this form of currents, they require its more direct local application

9 The diseases which have derived most benefit from this therapeutic agent, belong to the arthritic class rheumatism and gout

10 In certain diabetic subjects the sugar has disappeared altogether from the urine under the influence of these currents, while in others there has been no such change, notwithstanding the manifest and constant improvement in the general condition Is this difference due to the imperfection of the electric apparatus or to the manner of its application? It is hoped that further experience will soon afford an answer to this question, although the fact that diabetes has many different causes, may in itself explain the difference in the results obtained by this treatment

In conclusion, the currents of high frequency and of high tension introduced into electro-therapeutics by Dr d'Arsonval greatly increase the field of action of medical electricity They furnish general medicine with a new and valuable means of treatment, capable of modifying more or less profoundly the processes of nutrition—(Abstract of a paper read before British Medical Association, 1895)

PUBLIC HEALTH

Typhoid Fever—In Connecticut, New York, Pennsylvania, Ohio, Michigan, District of Columbia and Chicago, typhoid fever has been unusually prevalent It is probable that in Pittsburg and Allegheny the disease has been more severe according to population than most of the other cities With the advent of cold weather, however, the disease will become less serious, and in Chicago it has already markedly diminished

To Regulate Undertaking—A law has been passed in Pennsylvania to provide for the better protection of life and health by diminishing the danger from infectious and contagious diseases through the creation of a State board of undertakers in the cities of the first, second and third classes, with systematic examinations, registrations, and licenses for all entering the business of burying the dead With the exception of a special provision made for persons now engaged in the business of undertaking, applicants for licenses must be examined by the board and found to be possessed of good moral character, skill and knowledge of the business of undertaking and have a reasonable knowledge of sanitation, preservation of the dead, disinfecting the body of deceased persons, the apartment, clothing and bedding in case of death from infection or contagious diseases All persons receiving a license from the State board of undertakers, shall also register the fact at the office of the board of health at the city in which it is proposed to carry on business But nothing contained in this law is to be construed to apply to *bona fide* employes of a duly licensed or registered undertaker, or to persons engaged simply as layers out or shrouders of the dead, or to the employes of any cemetery whose duties and business extend no further

Pasteurization of Milk and Cream for Direct Consumption—Bulletin No 44 from the Agricultural Experiment Station connected with the University of Wisconsin, consists of a scientific as well as practical dissertation upon the pasteurization of milk and cream, written by H L Russel, and the following conclusions are of direct interest to the physician as well as to the layman from a hygienic point of view the elimination of living germs from milk is imperative At present, no better methods have been suggested for this purpose than pasteurization and sterilization Inasmuch as pasteurized milk and cream conform more closely to the normal fresh product in certain essential particulars than the sterilized, it follows that pasteurization is better adapted for general purposes The pasteurization of milk or cream consists in heating the liquid to a temperature that is fatal to the vegetating growing bacteria and still not high enough to materially change the physical characteristics of the product The minimum limit for pasteurizing should be a point at which the tubercle bacillus is killed, and in general an application of heat at 155 degrees F for twenty minutes may be chosen as a medium standard Treated in this way, and chilled as quickly as possible after the heating, the destruction of germ life in the milk averages about 99 7 per cent, and the effect of stopping the putrefaction and fermentative processes of so much organic life can not be attended with other than beneficial results

Tuberculosis in Cattle and the Tuberculin Test—The close relation between bovine tuberculosis and certain forms of human tuberculosis render all scientific investigations into the condition of dairy cows as regards the existence of tuberculosis of great interest to the physician, to say nothing about the great practical importance of such studies In Bulletin No 40 of the Agricultural Experiment Station of the University of Wisconsin (issued July, 1894) are contained the details of results obtained with the injection of tuberculin in the station herd consisting mostly of milch cows, and at this time it will suffice to say that of the thirty animals inoculated, twenty two responded or reacted to the test in such a positive manner that there could be no question as to the diagnosis, and this diagnosis was verified in every instance by the post-mortem examination, showing that in this herd there existed a veritable epidemic of tuberculosis Russel, the bacteriologist to the station, and the author of this bulletin, concludes with the following recommendations as regards the use of tuberculin 1, that it be employed in herds used for a general milk supply, because here is the main source of danger as regards human infection from the use of milk containing tubercle bacilli In connection with this, the question becomes pertinent as to how many milkmen supplying large cities, or smaller for that matter, are ready to furnish a guarantee to their patrons, based on the use of the tuberculin test, that there is no possible chance of disease lurking in the herds furnishing the milk 2, in dairies producing milk intended for children and invalids, the necessity for the fulfillment of this recommendation needs no emphasis from the physician who knows only too well the great susceptibility of the immature system of the child, or of the enfeebled one of the invalid to tuberculosis, and yet how long shall we continue to prescribe a milk diet without any guarantee of the purity of the milk? This demand can now be met with comparative ease by the dairyman and the consuming public need but say the word that will make it imperative for him to furnish the requisite guarantee 3, in the purchase of new animals the tuberculin test should be passed successfully by the animal in question The justice of this recommendation is self-evident from whatever standpoint taken, and it is particularly the duty of the family physician to see to it that this demand is fulfilled whenever cows are purchased by any of his patrons for the purpose of supplying children or invalids with absolutely pure milk It is quite plain that if the demands for non-tuberculous milk were carried to the extent included in these recommendations, then tuberculosis among cattle would be almost entirely stamped out in the course of time, and it would seem the plain duty of local health departments and of the State Boards of Health to take an active part in educating the public and the medical profession up to a point where the importance of this comparatively simple method of preventing tuberculosis would be fully understood and enforced—by direct legislative means, if necessary

Health Reports —The following health reports have been received by the Supervising Surgeon General, Marine-Hospital Service

SMALLPOX—UNITED STATES

New Orleans October 19 to 26, 18 cases, 3 deaths
Michigan, Detroit October 19 to 26, smallpox reported Rochester, October 19 to 26, smallpox reported, Hamburg Twp, October 23, 1 case

SMALLPOX—FOREIGN

Buda Pesth October 7 to 14, 1 case
Cairo October 1 to 7, 3 deaths
Calcutta September 14 to 21, 1 death
Madrid October 8 to 15, 7 deaths
Moscow September 28 to October 5, 1 case
Naples October 12 to 19, 7 cases, 7 deaths
Nogales October 19 to 26, 1 case
Odessa October 5 to 12, 1 death
Rotterdam October 12 to 19, 1 case
Zurich October 5 to 12 3 cases
Manzanillo September 1 to 30, 17 deaths
England, London October 12 to 19, 1 death
Dublin October 12 to 19, 2 cases

CHOLERA

Bombay September 24 to October 1, 1 death
Calcutta September 7 to 21, 28 deaths
Madras September 21 to 27, 1 death
Singapore September 13 to 17, 2 deaths
Austria-Hungary October 1 to 7, 19 cases, 18 deaths
Russia, Dept of Volhynia September 15 to 28 4,269 cases, 1,701 deaths, Dept of Kew September 19 to 26, 14 cases, 18 deaths
Turkey Constantinople, September 24 to 26, 4 cases, 4 deaths, Hudauendkjar September 20 to 29 9 cases 5 deaths, Diabekir September 12 to 26, 21 cases, 18 deaths, Maschuk September 25 to 28, 10 cases, 6 deaths Mossoul September 20 to 24, 1 case, 2 deaths
Formosa July 28 to August 10, 150 cases, 56 deaths
Tangier September 23 to October 2, 197 cases 142 deaths
Japan from outbreak to October 3, 50,431 cases, 34,719 deaths

YELLOW FEVER

Cienfuegos October 14 to 27, 2 deaths
Sagua la Grande October 12 to 26 10 cases, 1 death
Santiago de Cuba October 13 to 26 50 deaths
Vera Cruz October 17 to 24 1 death
Taribacoa September 1 to 30, 18 cases

ASSOCIATION NEWS

Treasurer's Notice —The Treasurer has received the following for membership dues with which names were not sent

$5 (currency) Envelope post marked Boston, October 27, 10 P M

$5 (currency) wrapped in piece of purple paper Envelope post-marked Los Angeles, Cal, October 30, 1 30 P M

$5 check not signed No 71, Cincinnati, Ohio, on the National LaFayette Bank

Any information in regard to the above will be appreciated by the Treasurer, H P Newman, Venetian Building, Chicago

MISCELLANY

Protonuclein —Protonuclein is the last of the many substances which is recommended as "a positive and never failing" cure for cancer

Correction —In our issue of October 26, in mentioning the Case Recorder of Dr Lyon, his address was given as Milwaukee It should have been 921 Milwaukee Avenue, Chicago

Antitoxin is Vaccine Virus —The second definition given by the Century Dictionary for "vaccine virus" is "In a general sense, the modified virus of any specific disease introduced into the body by inoculation, with a view to prevent or mitigate a threatened attack of that disease or to confer immunity against subsequent attacks" Adopting this meaning of the term, the Board of the United States General Appraisers at New York, decided July 23, 1895, that antitoxin is vaccine virus and as such is exempt from duty under paragraph 664, act of August 28 1894

Heredity in Longevity —The *Dublin Journal of Medical Science* quotes an interesting statement by Sir Benjamin W Richardson concerning his observations on the duration of life of the offspring as compared with that of the parents He considers that if the ages of the two parents and of the four grand-parents be added together and divided by six, the age of the case in point will be told with an average variation of not more than two If the ages of the parents are high, the offspring tends to improve on them, if low (say an average of 40 or lower), the life of the offspring will probably be shorter

The Hahnemann Monument —The *Medical Century* (homeop) says that the sculptor, Mr Chas Niehaus of Pittsburg, has the final model of the Hahnemann statue under way and concludes thus "In this connection it may not be amiss for us to take a little unction unto ourselves because of the success attending our endeavors as monument builders The Allopathic Association, which is also negotiating with Mr Niehaus for the Rush monument, has raised $5,000 in two years for their monument The homeopathists have raised $25,000 in less than a year" We presume our erring contemporary by the term "Allopathic Association" intends to refer to the AMERICAN MEDICAL ASSOCIATION, and although we reject the epithet 'allopathic," we must admit the truth of the remainder of the statement

Treatment Provided for North Dakota Drunkards —There are several provisions in the law passed by the last Legislature of North Dakota which distinguish it from the enactments of some of the other States on the same subject Here it is provided that the drunkard is to be sent to a reputable institute designated by a committee of three persons to be appointed by the Governor *Section 11 of the Act says that* it must be some reputable institute for the treatment of such disease, that will treat the same at the lowest figure, but the board of county commissioners shall not be compelled to send him to the institute making the lowest bid unless, in their judgment, the best interest of the drunkard shall be promoted thereby Furthermore, his cure and treatment is at all times to be under the supervision of the board of county commissioners, who may at any time they see proper, stop the treatment of any such drunkard, or change him from one institute to another, as to them shall seem meet and proper

Memorial Hospital, Brooklyn —On October 30, a new hospital was opened in Brooklyn, the central building and one wing being built and in readiness to take up the work that has hitherto been carried on at 1153 Pacific Street, at a cost of $100,000 According to the plans of the architect, the hospital, when complete will have another wing The present completed structure has accommodations for the three departments of the institution—the hospital proper, the training school for nurses, and the memorial dispensary There are accommodations for 100 patients and 40 nurses The branch dispensary on Bedford Avenue will be maintained as heretofore From seven hundred to one thousand patients are treated there monthly The Memorial Hospital for Women and Children was founded in 1883 The plot of ground owned by the hospital comprises an area of not less than 26,000 square feet, in a very eligible location

Invalid Aid Society of New Mexico —According to the *Albuquerque* (New Mexico) *Citizen*, of October 25, the following petition is being circulated for signatures throughout the United States, at the instance of the Invalid Aid Society of New Mexico

To the Honorable, the Senate and the House of Representatives of the United States

The undersigned, residents of the State of ——, interested in the welfare of the vast numbers who are suffering from pulmonary diseases and other climatic ills in the United States, and believing that the climate of New Mexico is admirably adapted for the alleviation and cure of diseases of the air passages and lungs, respectfully petition your honorable bodies to set aside one or more tracts of land recognized as adapted to such uses, containing 10,000 acres each, to be used as homes and resorts for the benefit of such invalids, the provision for such donation to be incorporated in the bill for the admission of New Mexico as a State

A Series of Ten Thousand Cases of the Serumtherapy of Diphtheria —The New York *Herald's* European edition publishes deductions drawn from statistics collected by a Berlin physician, Dr A Eulenberg, of diphtheria cases treated with antidiphtheritic serum between Oct 1, 1894, and March 31, 1895 in private practice "Out of 10,240 cases of diphtheria reported to him, 5,790 were treated by the antitoxic serum, and 4,450 by other methods The report says that of the 5,790 that formed the first group 552 died—that is to say, 9 5 per cent, of the 4,450 patients of the second group 652 died —that is to say, 14 6 per cent The compiler is of opinion, however, that the cases treated by serum were mostly bad cases of diphtheria, while those treated by the other methods were not so serious This inference is rather confirmed by the report of Dr Kurth, of Bremen, who had only 6 8 per cent of deaths among patients treated by serum, but 24 per cent of deaths among the others" Dr Eulenberg's statistics show also that the efficacy of the serum treatment is greater when it is begun in the very early stage of the diphtheritic attack Thus the total death rate among the patients with whom the serum treatment was begun on the first or second day of the attack was only 4.2 per cent, whereas among patients who did not receive an injection of serum until the third day of the complaint, or even later, the death rate was four times as large (16 8 per cent) In cases of children less than 2 years old, the relative difference in the figures is still marked In the *Deutsche Medicinische Wochenschrift*, for September 19, appears Dr Behring's last paper on the progress of serum treatment, entitled, "*Leistungen und Zeile der Serumtherapie*"

Bicycle Fatigue Utilized —According to the *New York Medical Journal*, an Italian specialist in otology has undertaken the study of the influence of fatigue on audition He made examinations of twenty-four bicycle riders after they had ridden thirty-two miles in two hours and a quarter Two of the men complained of subjective noises only, while in nearly all of them the perception of sound by aerial conduction was less marked than in the normal condition, and the experiment showed negative result In the riders who were subjected to an examination with tuning-forks, a slight diminution in the perception of loud sounds was ascertained The competitors were again examined after a rest of from two to seven hours, and in six of them the auditory powers were found to be the same, in two it was not so good, and in the sixteen others it was better, the aerial perception had increased from a few centimeters to a meter and a half The men in whom the amelioration was most marked, in whom, consequently, the hearing had undergone the greatest change, were those who had had little experience or training Conclusions physical fatigue evidently causes a temporary weakening of the auditory power This fact demonstrates also that the effects produced by great physical exercise are not shown by muscular fatigue only, but they remotely affect the entire organism, and especially the nervous system, while the special senses, on account of the delicacy of their function, are more likely to reveal the effects

The Dishonest Nurse a Rarity —An instance of that rare form of culprit—the thievish nurse—has recently been brought to light in Brooklyn From the editorial page of the *Eagle* of that city the following comments on the case are selected

"Ethel Oliver, a good looking damsel of 22 years, had made a confession Sne has been a nurse in the Seney Hospital, and in that capacity had used her opportunities to steal She robbed the hospital, she robbed her fellow nurses, she robbed the patients, even as they were dying, and she entered the dead-house to despoil the corpses She was so rosy and innocent in her appearance that nobody thought of suspecting her If there is any foundation for believing that a habit of stealing can be a disease, surely this instance seems to support it There was no urgent need for theft The young woman was making fair wages, she had clothing and board and shelter, some comforts and even luxuries She had none of the usual motives that are urged in extenuation of this mean form of crime"

The incident is a sad one and would be an unsettling one, were it not for the fact that such events are of the rarest, it is one of those cases that prove the contrary rule In hospitals, asylums and in private homes thousands of men and women are employed as nurses, and not one in a thousand is known to violate his or her trust The advantages for theft are uncommonly ample The people who may be robbed are helpless, and some are out of their wits, so that they would not know whether they were robbed or not There are no watchers to oversee the nurses and report on their conduct They are in a position of absolute power, for the nonce Yet they almost never presume upon their position and power

Medical Men in Politics —The *Boston Medical and Surgical Journal* comments upon the slender influence over wholesome legislation that comes within the power of the medical profession Doubtless every community has its quota of physicians who are not too much occupied with professional work to give a share of their time to political interests Doubtless, also, a small proportion is willing to engage in legislative duty if called upon so to do by the community wherein they respectively dwell But it is unfortunately, also, the case that those who "go to the front," from our profession, for such legislative functions are not from the representative men in medicine, they are ordinarily chosen to represent something bearing upon "spoils" or "bone-hunting" Their interests with the sanitary and medical interests of their constituents are commonly subordinated to relatively small issues Then, as the *Journal* remarks, the kind of work that is called "political" is, for the most part, distasteful to men of the type who make a success in medical life, and may even be by them regarded as incompatible with professional success The *Journal* closes its article by citing an instance which speaks for itself, regarding the kind of selection of a politico medical representative, that may sometimes be made even in enlightened New England

'A conspicuous example of the influence of the medical man in politics in retarding legislation for the benefit of the public health, was the attitude taken by Senator Gallinger, of New Hampshire, who had been a medical practitioner in that State, on the bill appropriating money for a bacteriologic laboratory and disinfecting service and for the distribution of antitoxin in the District of Columbia It will be remembered that his attitude, as noted in our issue of Feb 7, 1895 was against the passage of the bill, and that his influence was thrown squarely against this legislation for the public health rather than in favor of it There can be no doubt that there is need of the representation of the medical profession in our Legislatures by the right class of men from the highest ranks of the profession And inasmuch as active participation in legislative work is impossible for the rank and file of the profession it becomes the duty and privilege of what may be called the medical leisure class to do this work, we mean those of independent means, who are not dependent upon the practice of their profession for their living"

Senator Gallinger is supposed to be a homeopath and his actions must be viewed from that standpoint

The Medical College of To-day—The Boston *Medical and Surgical Journal*, September 26, prints Dr H O Marcy's address before the Syracuse University Medical Department in June last Dr Marcy's subject was 'Personal Service as the Especial Exponent of a Great Profession" One of the consequents of this Commencement anniversary, was the raising of a fund of $100,000, contributed largely through the instrumentality of the alumni of the University, to be devoted to the erection of a new building, which is already rapidly approaching completion Of the old and the new in medical colleges, he spoke as follows

"The medical college of to day demands another building or a series of buildings, than that of the former pattern The amphitheater as the lecture room—cramped crowded, stifled in the upper rows, to the last degree inconvenient of access, reached by garret stairs, to descend to seats, as upon an illy-constructed ladder, a nightmare dream of our earlier years—should be relegated to the past Bright, airy, well lighted rooms are required, made pleasing and attractive, with good seats and tables, where the personal work may go on under the direction of well-trained assistants The modern medical college should be so closely connected with the hospital that the clinical teachings may be made illustrative and profitable Indeed, the hospital should be the *workshop* in the better sense, where the student becomes familiar with the 'living pictures' of our poor broken humanity, the reconstruction of which is to be his future life-long labor Hospitals are important for the care, especially of the poor the home for the friendless These, the public have long held in kindly interest and support As a rule, the best physicians of the respective localities have willingly rendered gratuitous service, but the medical college has been too often looked upon as a private affair, a doctor's business venture, entered into for gain Should it not, the rather, be considered by the public as a *technical school* of the highest order? Within a few days I have examined with some care the Johns Hopkins Hospital in Baltimore, in regard to the advantages offered for the instruction of medical pupils Here the usual process is reversed. The hospital predominates, but there are laboratories in considerable number with facilities for the teaching of the *science* of medicine, while the *art* is in daily practice in its many splendid wards The medical college proper is yet to be, but the thought tends directly in the line of small classes, personally trained by competent teachers These to be competent require special instruction in the art of teaching, now more lacking in medicine than in any of the great departments of science"

Philadelphia Notes

JAMES E GARRETSON M D, Professor of Anatomy and Dean of the Philadelphia Dental College and Emeritus Professor of Oral Surgery in the Medico Chirurgical College of Philadelphia, died of inflammation of the bowels at Lansdowne, October 26 He was born at Wilmington, Delaware, October' 1828 He studied and practiced dentistry for several years with Dr Thatcher of that city, subsequently he attended lectures in Philadelphia and graduated in dentistry in 1857, and two years later he was graduated in medicine at the University of Pennsylvania He joined Dr D Hayes Agnew in conducting the famous Philadelphia School of Anatomy in 1862, and later was made professor of anatomy and oral surgery in the Philadelphia Dental College He rendered valuable aid in re organizing the Medico Chirurgical College and in placing it upon a broad and secure foundation, and for some twelve years was professor of oral surgery in that institution, being made Emeritus on his retirement from the Medical College a year ago He continued his active connection with the Philadelphia Dental College until his death He was the author of a text-book on oral surgery and also of works of a popular philosophical and literary character, first published under the name of John Darby The principal of these are "Odd Hours of a Physician," "Brushland," "Man and His World," and "Nineteenth Century Sense," which gained for him considerable literary reputation He delighted in the society of students, who held him in such admiration that a Garretsonian Society was formed several years ago, which has met monthly ever since, for discussion of scientific and philosophical questions

Hospital Notes

THE Naval Hospital of New York harbor, located in the Brooklyn Navy Yard, is now undergoing some very important improvements The old structure dates back to 1839, and has long been in need of modernizing treatment Congress has appropriated the sum of $60,000 for its improvement The changes will consist mainly in improving the interior of the old building reconstructing most of the wards and the construction of two new buildings The principal of these will be of brick, three stories high It will contain the mess-hall of the convalescents and a private dining room for the officers, a dispensary, and on the third floor a completely equipped operating room This will have tiled floors, enameled iron furniture and fittings, operating tables of enameled iron and glass, and glass sinks and lavatories In connection with the operating room there will be a "recovery" room, a sterilizing room and a surgeon's chamber and lavatory

Society Notes

THE ALLEGHENY MEDICAL SOCIETY held a meeting in Pittsburg October 15 The following resolutions were adopted

WHEREAS The sanitary conditions of Allegheny County are objectionable in many respects, and

WHEREAS, It is believed that methods for their improvement are readily available, therefore, be it

Resolved, That it is the opinion of this society that every reasonable effort should be made to improve the character of our drinking water by removing from it pernicious material which it contains, and by persistent and energetic measures to prevent its pollution

Resolved, That persons affected with contagious and infectious diseases, including pulmonary consumption, should be subjected to such regulations and restrictions as will afford reasonable protection to the community at large

Resolved, That all establishments for the propagation of vaccine virus should be subject to the most rigid inspection, and such rules for their management adopted as will best prevail against infection It is hereby recommended that the vaccine virus distributed by our boards of health shall be subject to such tests as may be practicable against the presence in it of septic material

THE annual meeting of the Military Tract Society was held in Monmouth, Ill, October 18 The following officers were elected for the ensuing year President, Louis Becker, Knoxville, First Vice-President, C R Harrel, Colchester, Second Vice President E J Mitchell, Roseville Secretary and Treasurer, O B Will Peoria The next meeting of this society will be held in Peoria——The regular meeting of the Kansas City Mo, Academy of Medicine was held October 26——The Jasper County Medical Society held a regular meeting at Newton, Iowa, October 30

St Louis Notes.

The St Louis Medical Society —The program for the meeting of October 31 was made up of papers devoted to diphtheria Dr Meisenbach discussed diphtheria from a surgical standpoint, and while favoring antitoxin, pointed out the fact that as a practical necessity in many cases, intubation and tracheotomy would still be required Dr King treated the subject from a medical point of view, and Drs Martin, W W Graves and Sutter gave their experience in the treatment of the disease with the antitoxic serum The general discussion was most favorable in the light it threw upon the value of the antitoxin, and the majority expressed views in favor of its employment

The St Louis Board of Health now requires that a report of the results of treatment of cases of diphtheria for which it had furnished tubes or serum be made, in order that statistics may be compiled

Detroit Notes

The Wayne County Medical Society —Looking back upon a year of success, the society enters upon a new year with the following officers President, E B Smith (re-elected), Vice-President, W R Henderson, Secretary, T S Hough, Treasurer, C Henri Leonard, Trustees, Drs W J Brand K Gunsolus, L E Maire, T J Parker, O P Eaton The President entertained the society at his home on the evening of the 8th ult About two hundred were present

The Detroit Medical and Library Association —This organization held its annual meeting on Monday, the 8th ult, when the following officers were elected President, E T Tappey, Vice President, C W Hitchcock, Treasurer, A P Biddle, Secretary, W S Anderson The retiring President, Dr Eugene Smith, entertained the members with a sumptuous repast

Detroit Gynecological Society —On October 3 this society held its annual meeting, at which the officers for the ensuing year were elected President, N W Webber, Vice-President, Florence Huson, Secretary-Treasurer, R A Newman A banquet followed the business meeting, given by the retiring President, Dr E T Tappey

Detroit Academy of Medicine —The following officers for the coming year were elected at the annual meeting of this body held on Tuesday, October 9 The President, Dr A H Bigg, entertained the members and invited guests at dinner President, W R. Chittick, Vice-President, D La Ferté, Secretary, C W Hitchcock Director for a term of three years, J E Emmerson

Personal —Dr W J Brand is a candidate for alderman on the Independent ticket He has running against him both a Democrat and a Republican ,

Mortality Report for the Week —The report of the Health Office shows that during the week there were 107 deaths in the city, 52 being children under 5 years of age, 11 occurred from diphtheria

Birth Report for the Week —One hundred and five births were reported for the week, of which 52 were males

Report of Contagious Diseases —There are at present 41 cases of diphtheria, of which 28 are new, 9 cases of scarlet fever, 3 being new, 1 case of smallpox

Louisville Notes

Edward R. Palmer Memorial Meeting, held in the Alderman's Chamber, City Hall, Louisville, Ky, Oct 26, 1895, under the auspices of the Louisville Surgical Society The meeting was called to order by Dr Geo W Griffiths The Secretary, Dr Henry E Tuley, read letters of sympathy, and regrets for inability to attend the meeting from Drs James Nevins Hyde, Chicago, Lyman Beecher Todd, Lexington, Ky, Arch Dixon, Henderson, Ky, John Blake White, New York city, William Judkins, Cincinnati, John A Larrabee and Ap Morgan Vance, of Louisville The President then called upon the speakers appointed

Dr Jos M Mathews said When the committee representing the Louisville Surgical Society asked me to be one of the speakers to-night, I gladly consented, because it was an opportunity to pay a slight tribute, at least, to my dead friend And yet when I was confronted with the duty of writing the same, I must confess that my pen near failed me The question was, from what standpoint shall I speak of Palmer? As Ed Palmer, my friend? As Dr. Palmer the successful physician and surgeon, as Professor Palmer, the distinguished lecturer, or as Palmer, the wit, orator, dilettante? If one were standing on a street corner, and were to see a horse dashing down the street driven by a handsome man, of small features, a small but attractive moustache spectacles adjusted to a nicety and hair brushed as if to attend an evening reception, with sparkling eyes, and with dash and enthusiasm, with neglige shirt and coat to fit the man, with a " Hello, old boy!" That is Ed Palmer If one happened in the sickroom and heard a knock at the outer door, which upon being opened admitted a man above the average height, with a countenance beaming with bright smiles, a hand that clasped another with firmness and fidelity, with a voice as musical as a woman's, with a step as vigorous as a girl's, with words of cheer and hope for the patient, with the bringing of flowers in lieu of medicine, and smiles instead of tears, who with his going out, left the sick and afflicted the better that he had come This is Dr Palmer If your footstep should have been near the door of the lecture hall of the old university down on Chestnut Street, on some pleasant afternoon, you would have seen a man run up the flight of stone steps with the agility of a boy, disappear a moment from view, when the voices of many students and the clapping of many hands would betoken that a favorite stood before the class If you were within distance to hear the clear cut sentences, the logical reasonings and deductions, the beautiful similes, the wonderful descriptions, the drawing of word pictures, amid the shout of applause This was Professor Palmer But if you would see the man in his element, go with me where sat at table friends in a banquet hall Amid the strains of music, the perfume of flowers, the clattering of glasses as they bespoke mirth and good fellowship, the laughter of the guests, the presence of women, this is where Palmer was wont to linger As a voice was heard, like the clear ringing of a bell, so well known to all of us, silence at once prevailed, ears were held expectant, eyes were strained in the effort to see, men and women alike stood for vantage ground, and every word that fell was as a gem divine, every sentence as refreshing as the falling dew to flowers Dramatic in delivery, terse in expression, a voice as musical as a rippling brook, in form like an Apollo, his dress a model, his elocution that of a finished orator, the climax like the calm that succeeds the storm Before the applause has ceased the soft low notes of the voice that had entranced in declamation, now soothes to rest in song, and many an eye is dimmed with tears and hearts made glad as the strain of "My Old Kentucky Home" is sung as he alone could sing it This is Palmer the *superb* Palmer possessed many characteristics that stamped him with originality He was a positive character, and yet, unlike other men, did not make enemies by being so He had no secrets, what he said or did was open to the inspection of the world He was an enthusiast about all things He thought the United States the best of all nations, his State the best of all States, his city the best of all cities His horse could outrun any other horse, and his dog could whip any cur in town His friends, he believed, were as true as steel, and his sons—why, other boys wern't in it! This enthusiasm was born of his nature, and he loved those things so well that he was brought in contact with, that nothing could shake his faith His wit scintillated like the diamond and was as sparkling as champagne Jokes told by him suffered nothing by age A medical gathering without Palmer was stale ale without its froth His nature was continually effervescing, and running over with good humor, with a physique that was perfect, and continued good health, it is no wonder that he always expressed himself as feeling like a "2 year-old," and that he was in the race to win Sorrow never had an abiding place in his breast and he had no time for tears He threw melancholy to the winds, and often physic to the dogs His laughter was contagious and his good humor perennial He did not "fling away ambition," but profited by it His industry was wonderful and his success unbounded He wasn't governed by policy, but every one knew where to place him He was either on one side or the other and knew no middle ground Had he been a politician instead of a doctor, he would have gone to Congress or to the Senate Had he turned his attention to music, the opera would have had a brilliant star He believed that life was worth the living and that croakers should be killed He died as he had lived, he sped through life like a meteor, brightening everything in its path, and went out with a flash I would not clothe his bier in black or lay him away with mourning Rather strew flowers upon his grave and let the rose and hyacinth waft their fragrance back to us, emblematic of his life He speaks to us through laughter and good cheer, and we will remember him in sunshine and not in rain Peace to his ashes!

Dr L S McMurtry said It is an old custom of our profession to render deserved honor and respect to the memory of our departed colleagues by public eulogy An eulogium of any man is confessedly a difficult task, but the embarrassment is greatly increased when, as in the present instance it must be brief and the subject is an active, talented, accomplished, versatile individual, who for years occupied a familiar and conspicuous place in public and professional esteem Edward Rush Palmer was no ordinary man, indeed, in more senses than one, he was a remarkable man, an acute thinker, a facile writer, an erudite and accomplished teacher, an orator, a resourceful and successful practitioner, pursuing his work with the activity of an enthusiastic mind in a vigorous body In all these relations he was prominent among his contemporaries, recognized and esteemed by the profession at home and abroad Though dying in mid career, Palmer had occupied a prominent position in the profession for almost thirty years Few men ushered into responsible professional duties at so early an age are equal to the demands and exigencies imposed upon them He was on the rostrum when he had barely passed his majority, he was actively engaged in practice while almost a youth Others, more competent than I, will speak of his abilities as a teacher I knew him best as a practitioner and a fellow-member of our medical societies For years I have been in cordial and pleasant association with him in these organizations Of late years the medical societies have grown in importance as a means of scientific improvement They are the post-graduate schools of the profession In our city the medical societies have cultivated social along with scientific advantages, bringing the members in more intimate and cordial relations In State and national organizations Palmer was a prominent figure, always a favorite with the delegation from his city and State Upon our local societies he was a regular attendant and participated actively in the discussions He was the life and charm of those occasions when social pleasure abounded Who that knew him can ever forget his great animation, his vivacity, his rich sonorous voice, his personal charm, his bright face and handsome form his magnetism, and the ease and grace of his manner? It was the possession of these qualities, superadded to a thorough knowledge of his profession, which made him such an attractive and impressive figure in the medical societies to which he belonged I would not convey for a moment the impression that his function in these organizations was unimportant, on the contrary, he was a worker Some here present will doubtless recall his last paper read before the Academy last spring, containing many original views upon a subject of great practical importance His papers always bore evidence of careful study, presenting bold and often original views, with practical application As an after-dinner speaker he was the equal of the best the profession of Kentucky has ever had, and this is saying a great deal It will be many years before those who heard his brilliant speech at the banquet in Frankfort three years ago will forget it It was on the occasion of the annual meeting of the Kentucky State Medical Society and while the subject was announced (at his request) as "Where are we at?" the sentiment could more appropriately be expressed as "Kentucky, its products and its people" His remarks were preceded by singing the first lines of that song of which he never tired, 'The Old Kentucky Home" Indeed, he was at his best on such occasions, and carried his audience with him by the magnetism of his person and manner the charm of his voice, and the power of his eloquence He will be keenly missed in our medical societies, where he was an attractive and marked personality The Louisville Surgical Society was, as has already been stated, his special pride and care, he having been the moving spirit in its organization and an active promoter of its usefulness I doubt if those who had only a cursory acquaintance with Palmer during his latest years have any adequate idea of the extent of his general literary culture In an address delivered some years ago he said "I remember when I entered the profession that I despaired of ever being a successful doctor, and became almost half convinced that I had mistaken my vocation Under that cloud I laid my Watson and Stillé aside and spent much of my time with the best poets, essayists, and fiction writers of the age As I remember now the course I took, it is with a pleasure which more than repays me for the serious misgivings I then felt, in thus supplementing the course which my seniors had advised Perhaps it was this experience which has led me to believe in a doctor's being a man of varied learning, and in his cultivating a taste for some improving pursuit or study with which to occupy his leisure hours"

For those who saw Palmer only in his hours of merriment it was difficult to realize that there was a serious and earnest side to his nature His physical endurance was most remarkable, and enabled him to appear as a man of ease and pleasure after a day given to the toil and exactions of a busy doctor's life In him, Nature had blended, in an exceptional manner, apparently opposing qualities When he had passed the fiftieth milestone his body, mind, and heart seemed as gay and undaunted as when in the twenties One could scarcely realize at times that he was a hard working physician and surgeon, devoting his life to our profession and making a handsome competency for his family

For a number of years Palmer was actively engaged in a large general practice During the last decade of his life he limited his practice to the specialty with which he became so prominently identified He was thoroughly in sympathy with all classes of people, and was eminently successful both in general and special practice It needs no argument in this presence to prove that such success is born of merit, that such attainment in our profession comes only by virtue of earnest labor, ability, self-denial and determination

No human character is, or can be, entirely perfect All men have their defects, their sins of omission and commission, and their faults Palmer had his, but of one base quality known to human character he was singularly free, that is hypocrisy Concerning his own life and conduct he had no secrets, and ignored all concealments on all occasions He was equally popular with the people and the profession His humanity drew to him friends from the lowest classes, and his sunny genial nature attracted the highest Nothing could more strikingly attest this than the large representation of all classes of the people who composed the immense gathering on that midsummer day when the last sad rites were held above his lifeless body

Mr President the setting sun, as it sinks into apparent oblivion, illuminates with indescribable splendor the horizon, making beautiful the very mists and clouds which obscure its passing radiance Our friend and colleague passed from life and joy and health and vigor into the silence and apparent oblivion of death almost within an hour Like the setting sun, the memory of his life of cheerful duty, his bright genial nature, his generous friendship and his humanity will illumine the horizon of the present long after his departure When in the years to come, we think of him, we would believe with the poet

> There is no death the stars go down
> To rise upon some fairer shore

Dr T L McDermott, said I scarcely know where to begin the recital of a story, so prolix in detail so embellished in its outline, so redolent of glamour and variety The lovely lines that permeate its majestic horoscope are aglow with all the radiant hues that fancy, in her wildest weavings, could adorn a human mold A career begun in youth with all its exuberant ardor undimmed through a stately manhood and rounded out in its fullest fruition before age had painted a line on its progress or dimmed a single lustre of its renown Possessed of a spontaneity so homogeneous and irresistible that thought and action were simultaneous, he charmed every circle that he entered and left a regretful void as he sped his checkered way There was no half-hearted, lackadaisical symposium in its meteoric flight over breakers or buffets, or velvets or violets it pursued the same tremendous tenor—undaunted by obstacles that seemed insurmountable and hopeful under reverses before which many have succumbed The indomitable pluck that dominated his youth continued perennial to his end A child of audacious genius he was fruitful in resources and skilled by in-

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ORIGINAL ARTICLES

THE OPHIDIANS

BY JOSEPH JONES M D, LL D
MEDICAL DEPARTMENT TULANE UNIVERSITY NEW ORLEANS, LA

In the summer of 1851, I began on Colonel's Island, Liberty County, Ga, a series of investigations upon he anatomic and physiologic differences and relaions of various animals, and especially of closely reated species These have been continued from time o time in my leisure moments, but the interruptions necessary upon the performance of the practical duties of an arduous and exacting profession, and wholly unavoidable during four years of active serve in the Confederate Army, 1861–1865, have prevented the rapid and continuous prosecution, and the desired perfection of these, to me, interesting labors The preparations which I have dissected, injected and preserved, numbering over two thousand, are at present deposited in the Museum of the Medical Department of the University of Louisiana (now Tulane), and serve as illustrations of some of the results of these investigations

The following measurements and drawings with the accompanying *observations are mere fragments* of my labors, which were designed to illustrate the principles of classifications, and the natural relations of animals and especially the relations of species, we hope, however, that they will be sufficient to illustrate the proposition that closely related species present anatomic differences which can not be referred to the action of mere physical forces or to any process of gradual evolution or transmutation of species

We shall confine our observations almost entirely to the *Ophidia* or serpents, as they form a natural order, presenting peculiar anatomic and natural characters, and being without feet, or obvious external organs of locomotion, they appear to present the simplest and best field for the investigation of the anatomic relations of closely allied species

The investigations will be confined chiefly to the relative positions of the internal organs and the minute anatomic differences presented by the position, size and structure of the respiratory organs

As the *Chalcida* form the connecting link between the *Sauria* especially, and the *Ophidia*, we will examine in the first place, the *Ophisauris ventralis Linn*, which is vulgarly regarded as a true *Ophidian*, and familiarly known as the glass snake

GLASS SNAKE (MALE)—OPHISAURIS VENTRALIS—DAUDIN

Anterior extremities rudimentary Inferior extremities rudimentary, ossa innominata present The tongue resembles this organ in the *Scincoidea*, as in the *scorpion*, or red-headed lizard (*Plestodon erythro cephalus* The *Ophisauris* unlike the true *Ophidians* has two lungs Right lung much larger and longer than the left, as shown in the figures The lungs are much more vascular than those of serpents, are without terminal membranous sacs, as in serpents, and are provided with distinct divisions, as in the *Chelonians* and *Sauria* The heart is situated opposite the bifurcation of the bronchial tubes and their junction with the lungs The vascular portion of the lungs lie chiefly below the position of the heart The lungs are not placed symmetrically in the general abdominal and thoracic cavity, but are apparently adapted to the general form of this cavity The left small lung lies *higher up than the right or long lung* Numerous dissections of both male and female specimens of various sizes and ages confirmed the preceding observations

The gall bladder is situated in the liver, and not at a distance from the liver, as in the case of true serpents The general shape and appearance of the liver and also the situation of the gall bladder resembles *more nearly that of the congo snake (Amphiuma)* Distance of gall bladder from anterior border of liver four inches, length of abdominal cavity seven inches The liver lies principally to the right, and the stomach to the left of the median line Spleen disconnected from the pancreas, and on left of median line Pancreas resembles the appearance of this gland in *Ophidians*

This family, *Chalcida*, is evidently from its anatomic structure, closely related to the family *Scincoidea*

Kidneys, lobulated and elongated, resembling in their symmetrical position and in their slender lobulated shape and yellowish color the kidneys of *Ophidians* The kidneys, on the other hand, in the saurians are short and leaf shaped and lobulated in a different manner

OPHIDIA—BROGNIART—SERPENTES—CUVIER

The name *Ophidia*, was first given by M Alexandre Brogniart to this order which comprehends the animals designated by Linnæus under the collective appellation of amphidia serpents, the order *Ophidia* adopted by M M Cuvier includes three families *Anguis*, *Pseudophus ophisaurus*, *Anguis and Aconitas*, *Amphisbæna* and *Serpentes* or true serpents

CROTALOIDEA—CROTALUS DURISSUS (BANDED RATTLESNAKE)

The specimen furnishing the following observations was a female It had 180 large broad plates in the abdomen, 18 broad plates in anterior surface of tail, and 6 divided plates, making 27 plates upon posterior surface of tail

The bronchial tube or windpipe passes down through the entire length of the vascular portion of the lung, and expands finally into a membranous bladder, without cellular divisions, consisting of a strong transparent membrane, the circumference of which when inflated is equal to that of the animal The upper portion of the lungs are thicker and more vascular than the inferior portion, the vascular gradually

of left kidney one inch, breadth, three-sixteenths of an inch Kidneys small and flat Ovaries contained eggs in various stages of development Length of alimentary canal twenty-three inches

CONCLUSIONS

From the preceding observations, it is evident that

While all *Ophidians* are formed upon a general plan and resemble each other in the general form of the body, and structure and arrangement of the internal organs, at the same time the different genera are distinguished by essential differences of structure

Closely related species present essentially the same structure and arrangement and relative position of the internal organs, and the similarity of external appearance and form and of habits and instincts, is attended by a comparative similarity in the structure and relations of the internal organs

It might well be doubted whether, in certain cases, as in the *Crotalus* and *Heterodon*, some of the species of naturalists might not be mere varieties springing originally from the same common stock or original parents

Marked differences are observed in the position and structure of the lungs in different genera, and, in fact, of all the organs, this is the best plan adopted for minute and differential anatomic investigations That the arrangement of the bronchial tube and hexagonal cells is not characteristic of the poisonous *Ophidians* is shown, on the other hand, by the absence of such arrangement in the *Elaps fulvius* (harlequin snake) which is poisonous, and, in the other, by the presence of a similar arrangement of the bronchial tube in the *Coronella getula* (king snake) At the same time there is a wide difference between the structure of the lung in the latter and in the *Crotaloidea*

We can only attribute these marked differences of internal structure in animals of the same growth, the same colors, and subjected to precisely the same climatic influences, to the original endowments or characters of the originators of the different genera, such characters being impressed by the Creator by his direct creative act We can not conceive of a harmless reptile developing in virtue of "innate powers," or in virtue of innate desires and selection a poisonous gland, any more than we can conceive that by such causes the peculiarities of its lung were gradually altered and evolved

These researches establish the important fact, that peculiarities of genera are dependent upon peculiarities of internal structure Similar well-marked differences may be shown to exist in the different classes of warm-blooded animals, but the demonstration is more clear and more valuable in the lower and more simply constructed *Ophidians*

The influence of physical agents upon the developments and variations of species is confined chiefly to alteration of color, size and vigor, and the cutaneous and osseous system, and not to direct structural alterations of the internal organs This will be illustrated by investigations chiefly into the changes of color in the human race, and more especially of albinism in the negro race

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The William F Jenks Memorial Prize of the College of Physicians of Philadelphia, for 1895, has been awarded to Dr Abram Brothers, of New York, for an essay on "Infant-mortality During Labor, and its Prevention"—*Medical News*, Nov 9

A REVIEW OF URETERAL SURGERY

An Address delivered by request before the Toledo Academy of Medicine, June 28 1895

BY R HARVEY REED M D

PROFESSOR OF PRINCIPLES AND PRACTICE OF SURGERY AND CLINICAL SURGERY OHIO MEDICAL UNIVERSITY SURGEON TO THE PROTESTANT HOSPITAL

COLUMBUS OHIO

The revelations of modern surgery are daily demonstrating that the ureter, like the appendix vermiformis, has for ages been the cause of numberles fatalities that have been credited to idiopathic causes

Each one of them covers an exceedingly importan sphere in abdominal surgery, and to the modern observer it seems strange that both of them should have escaped careful observation all these years One although having no known physiologic place in the human economy, plays a very decided pathologic role when affected with disease The other has a distinct physiologic function to perform, which if interfered with, is liable to cause grave disturbance, if no rapid dissolution

In glancing over the mortality records of the last decade, we are not surprised at the large death roll attributed to the so-called idiopathic peritonitis especially when we remember that death from disease of, or injury to the ureter, as well as that of the vermiform appendix was seldom if ever recorded Within the last ten years—thanks to aseptic and antiseptic surgery which have made possible the modern advancement of abdominal surgery—surgeons have discovered that much if not all the so-called idiopathic peritonitis is *secondary*, and much of it has been attributed to diseases of the vermiform appendix Likewise the laparotomist has discovered that the ureter, which for cycles unknown has rested undisturbed, has played an important part in the diseases peculiar to the abdominal cavity It is astonishing when we look over the literature pertaining to the ureter that prior to 1880, when an article was written by Emmet, we are unable to find anything on this important subject Following Emmet, we find an article by Staples, written in 1884, and another by Galland, of Paris, in 1885

From this on, reference to the surgical treatment of the ureter becomes more frequent, until up to the present time there have been written more than eighty different articles, pertaining either directly or indirectly to the surgery of the ureters That the ureter opens up a legitimate field of surgery, is beyond a question That the proper surgical treatment of the ureter may save a nephrectomy or even life is without controversy

These facts have led various operators to make numerous experiments, with a view of not only discovering some reliable method for the surgical treatment of the ureter, but to simplify them and, so far as possible, rob them of much of their danger and establish them as legitimate and reliable surgical procedures To Dr Howard A Kelly, of the Johns Hopkins University of Baltimore, the profession owes much for the modern advancement in ureteral catheterization

It is true, Simon sounded the ureter as early as 1875, Grunfield in 1877, Skene in 1889, Morris and Wells in 1893 Yet none of these distinguished authors have given us so much valuable and practical information in reference to the catheterization of the ureter as Kelly With the aid of the cystoscope, the electric light and the delicate ureteral catheter not

The *Elaps fulvius* is also at times, at least, rapacious, and preys upon other reptiles Thus, I have in my possession, an *Elaps* which has swallowed a black snake (*Coluber constrictor*) nearly equal to it in length The stomach has been pushed nearly to the anus, and the gastric juice has completely dissolved the flesh from the bones of the head and cervical vertebra, while the main portion of the snake, including the body and tail lying beyond the stomach in the distended esophagus, is in a state of perfect preservation The bronchial tube extends down alone for five and one half inches below the apex of the heart, where it expands into a bright vascular sac, with small well-defined cells The rudimentary lung opens just opposite the apex of the heart The cells of the vascular portions of the lungs are perfect hexagonal figures The cells are much smaller than in the lungs of the *Crotalus*, *Crotalophorus* and *Trigonocephalus*, the largest being not more than one fiftieth of an inch in diameter, and the smallest not less than one one-hundredth of an inch

In the *Elaps fulvius*, the bronchial tube does not extend through the vascular portion of the lungs, as in *Crotalus*, *Crotalophorus* and *Trigonocephalus*, but after the expansion of the vascular pulmonary bag, its rudimentary existence is marked by a fibrous band running down the central portion of the vascular lung Length of vascular portion of lung, two and one-fifth inches

It will be observed that marked differences of anatomic structure and especially of the lungs, are found in the four genera of poisonous snakes found in the Southern United States of America, viz, *Crotalus*, *Crotalophorus*, *Trigonocephalus* and *Elaps* The three former correspond to a certain degree in external conformation and internal anatomic structure, the latter differs in both external conformation and internal anatomic structure The *Elaps fulvius* resembles in the general shape of the body, as well as in the shape of the head and neck, the *Rhinostoma coccinea*, of Blumenbach The position of the heart, and the relations of the bronchial tube, as well as the general shape of the organs are similar in the two genera Like the lung of the *Elaps fulvius*, that of the *Rhinostoma* begins below the apex of the heart

Schlegel errs greatly when he associates the *Rhinostoma coccinea* with the *Heterodontes*, for it differs from them, not only in its external form, but also in the structure, relative size and position of the internal organs and especially in the position and structure of the lungs In the American vipers (*Heterodon Niger*, *H platirhinos* and *H simus*) the bronchial tube joins the lungs or vascular portion at an acute angle, and one branch of the lung runs up as a distinct sac, along the bronchial tube toward the head

OPHISAURIS VENTRALIS—DAUDIN—GLASS SNAKE (MALE)

Length of this snake twenty-five inches length of right lung three eighths inches, left lung one-third inch, tail thirteen and five-eighths inches, distance from tip of head to apex of heart three inches, to superior border of liver three-fourths of an inch, length of the liver one inch, breadth four-tenths of an inch

CROTALOIDEA—CROTALUS DURISSUS—(BANDED RATTLESNAKE)

The specimen furnishing the following measurements was a female, length of snake from extremity of head to the junction of the rattles with the tail, fifty-one inches, length of head and body, forty-seven and one-half inches, length of tail, three and one half inches, length of abdominal cavity forty-seven and one half inches, distance of apex of nose to apex of heart, nineteen and one half inches, to superior border of liver, twenty inches, length of liver, twelve inches, breadth, one and three-tenths inches, distance of inferior border of liver from gall bladder, one and one half inches, as usual there was a small separate liver along the course of the vena cava

CROTALOPHORUS MILIARIUS—(GROUND RATTLESNAKE, HOGNOSE RATTLESNAKE)

This specimen was a male and yielded the following measurements length of head and body, sixteen eight-tenths inches, length of tail, two and seven-tenths inches, length of abdominal and thoracic cavity (as there is no diaphragm, the entire cavity is included under the head) sixteen inches, length of alimentary canal, sixteen and one-half inches, distance of apex of heart from extremity of head, six and four tenths inches, length of vascular portion of lungs, four and four-tenths inches, distance from end of head to superior border of liver, six and seven-tenths inches, length of liver, two and eight-tenths inches, breadth of liver, three tenths of an inch

TRIGONOCEPHALUS CONTORTRIX—LINNÆUS—(COPPERHEAD)

The length of this specimen (female) from which these measurements were taken was thirty-one and one half inches, length of head and body twenty-seven and one half inches, length of tail four inches, number of abdominal plates 153, of subcaudal plates, 11, the tail terminated in a horny point, or hook-like button, which appears to be the representation of the rattle in the *Crotalus* Length of abdominal and thoracic cavity twenty-six inches, length of alimentary canal twenty-six inches, distance from end of head or point of nose, or snout, to apex of heart, nine and one half inches, length of vascular portion of lung eight inches, distance of extremity of head from superior portion of liver, nine and three-fourths inches, superior border of liver situated one-fourth of an inch from the apex of heart Length of liver, five inches, breadth three fourths of an inch, length of right kidney three and one-half inches, breadth of right kidney, four sixteenths of an inch, length of left kidney two and one-half inches, breadth, five-sixteenths of an inch, distance of inferior border of kidneys from anus, one and one-half inches

ELAPS FULVIUS—LINNÆUS—(BEAD SNAKE—HARLEQUIN SNAKE)

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BY R HARVEY REED M D

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COLUMBUS OHIO

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OPHISAURIS VENTRALIS—DAUDIN—GLASS SNAKE (MALE)

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The length of this specimen (female) from which these measurements were taken was thirty-one and one-half inches, length of head and body twenty-seven and one half inches, length of tail four inches, number of abdominal plates 153, of subcaudal plates, 44 the tail terminated in a horny point, or hook-like button, which appears to be the representation of the rattle in the *Crotalus* Length of abdominal and thoracic cavity twenty-six inches, length of alimentary canal twenty-six inches, distance from end of head or point of nose, or snout, to apex of heart, nine and one half inches, length of vascular portion of lung eight inches, distance of extremity of head from superior portion of liver, nine and three-fourths inches, superior border of liver situated one-fourth of an inch from the apex of heart Length of liver, five inches, breadth, three fourths of an inch, length of right kidney three and one-half inches, breadth of right kidney, four-sixteenths of an inch, length of left kidney two and one-half inches, breadth, five sixteenths of an inch, distance of inferior border of kidneys from anus, one and one-half inches

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It is true, Simon sounded the ureter as early as 1875, Grunfield in 1877, Skene in 1889, Morris and Wells in 1893 Yet none of these distinguished authors have given us so much valuable and practical information in reference to the catheterization of the ureter as Kelly With the aid of the cystoscope, the electric light and the delicate ureteral catheter not only the walls of the bladder may be subjected to ocular inspection, but either ureters may be sounded or catheterized at the will of the operator The ureters may be catheterized without the cystoscope by simply depending on the touch, but this is not nearly so reliable, and where the walls of the bladder are thickened by disease it is often impossible With the aid of the ureteral catheter, such as I herewith exhibit, devised by Dr Kelly, we are enabled to relieve stenosis of the ureter where it occurs within the lower third or where there is disease of one or both kidneys, we are enabled by catheterizing each ureter to determine by an analysis of the urine collected in this manner whether both of the kidneys are diseased, or if but one which one The use of the ureteral catheter is therefore, not only an important factor in the diagnosis of renal diseases, but of no small value for the treatment of stenosis of the ureter

Where valve formation and stricture of the ureter occurs so high up as to be beyond the reach of the catheter or sound, resulting in hydro or pyonephrosis nephrotomy and even nephrotomy may often be avoided by an operation with a view to the re-establishment of the lumen of the ureter

Fenger of Chicago reports a number of cases of this character relieved by plastic operation after the method of Heineke-Mikulicz, which consists in a *longitudinal* division of the stricture and transverse union of the longitudinal wound which shortens the ureter in proportion to the length of the stricture Professor Fenger prefers this method of operating to that of resection of the stricture as performed by Kuster Yet they both require great care in order to avoid extravasation of urine and they are both done at the expense of the length of the ureter Either method, however, we consider much more desirable than implanting the ureter into the vagina, perineum or the abdominal walls

Page of London, reports several cases of rupture of the ureter in the *Annals of Surgery*, for May, 1894, the treatment of which was anything but satisfactory He closed his article by saying 'that the question of *treatment can not be closed without a consideration* of the possibility of suture of the ureter and the prevention thereby of all the trouble which these various cases suffered Notwithstanding this suggestion, he rather discourages the plastic operation and suggests in the treatment of a ruptured or stenosed ureter that, 'it is one thing to find and expose the ureter in these conditions, and quite another thing when there is no fixed calculus to mark its position '

Herman Mynter, of Buffalo, New York, reports a case, in the *Annals of Surgery*, December, 1893, of valvular stricture of the ureter, which was closed by a plastic operation, which resulted successfully and in fifteen days after the operation the patient was discharged feeling well In a recent number of the *University Medical Magazine*, Prof Chas B Penrose, of Philadelphia, reports a successful operation where the ureter was involved by a scirrhous cancer of the cervix uterus, in which it became necessary to excise an inch of the ureter, which was afterward implanted high up in the bladder, after Van Hook's method In this case there was no symptom of bladder or renal disturbance and the patient left the hospital twenty days after the operation to all appearance well, although six months later she is reported suffering pain in the right iliac region, suggesting the probability of recurrence of the disease This operation shows that the implantation of the ureter high up in the bladder is a *successful* and practical procedure

In an exhaustive paper read by Dr Weller Van Hook of Chicago, before the Section of Surgery and Anatomy of the AMERICAN MEDICAL ASSOCIATION at its Milwaukee meeting, the Doctor arrived at some thirty-two conclusions in reference to the surgical treatment of the ureter among which he states, in conclusion 6 "Longitudinal wounds of the ureter at any point, heal without difficulty in the absence of septic processes, under the influence of ample drainage "

In conclusion 14, he says "In complete transverse injuries of the ureter in continuity, union must not be attempted by suture "

In conclusion 16, he advises "In complete transverse injuries of the ureter very near the bladder, the duct may be implanted, but with less advantage, into the bladder directly " The feasibility of this latter method is demonstrated in the case referred to above, by Professor Penrose In conclusion 15, Dr Van Hook states that "In complete transverse injuries of the ureter in continuity, union without subsequent scar contraction may be obtained by the writer's method of lateral implantation "

Where the ureter is too short to reach the bladder, Dr Van Hook recommends the making of a vesical diverticulum This is accomplished

1 By implanting the ureter upon the skin of the abdomen in the median line as near the bladder as possible Close the abdominal walls as usual, except for the presence of the ureter

2 When the patient is fully recovered from the primary operation, open the structures composing the abdominal wall, between the ureter and the pubes, down to the peritoneum and bladder The peritoneum must not be opened The bladder may be extended and raised exactly as in suprapubic cystotomy

3 Make two incisions in the bladder parallel to the median line, beginning as near as possible to the peritoneum without prejudice to its integrity, carry them down at a distance of about 15 mm apart *toward the neck* of the bladder under the guidance of the finger With scissors curved on the flat, the two incisions are now united at the lowest point and hemorrhage is controlled with pressure forceps It will be seen that we now have at our disposal a vesical flap of considerable extent hinged above by a nutrient pedicle

4 The ureter is loosened from the skin and brought well down toward the flap, which is simultaneously raised to meet it The vesical flap is firmly fastened back in its new position by catgut sutures, passing through the neighboring muscles of the fascia, and the end of the ureter is held in position by light catgut sutures which pass through the loose peri-ureteral connective tissue, if possible, and through the muscular structures near at hand

5 We are now in position to sew together the edges of the flap to form a tube, in the upper end of which the ureter is introduced, and to carry a similar row of light catgut sutures down the bladder wound itself. The lower angle of the vesical opening would best be left open for the sake of drainage It will in all probability cause no trouble in healing The upper part of the skin wound together with the fasciæ may be closed Under careful antiseptic treatment this procedure ought to be practicable, and as easy as the majority of the operations daily undertaken

The Doctor says he has practiced this method with considerable success on the cadaver, and argues that "we may safely say that, without opening the peritoneum, the bladder can be plastically extended to meet the ureter when that duct is brought out of the abdomen at any point not exceeding three and one-fourth inches inferior to the umbilicus" Hypothetically this is a very handsome operation, but before we would feel like indorsing it we would like to see its results on the *living* rather than the *moribund* subject There is no question but what the ureter, when sufficiently long, could be implanted in the bladder, or it may be successfully connected with the vagina, but we are frank to admit that we do not consider the latter a very advisable operation, for reasons which we shall state hereafter The question now arises, What method of surgical procedure shall we adopt where it is impossible to perform a plastic operation on the ureter that will unite it, when severed, or that will connect it with some other than normal connection with the bladder In order to furnish, if possible, a connecting link in this very important part of the surgical treatment of the ureter, we have conducted numerous experiments with a view of implanting the ureter into the rectum, and so far as the implantation of a single ureter is concerned, our experiments have been fairly satisfactory and successful, as you will see by the specimen herewith submitted for examination

Dr Van Hook, however, takes serious exceptions to this method of disposing of the ureter In his criticism he says "The implantation of one or both ureters into the rectum is absolutely unjustifiable under all circumstances," and gives as his principal reason that these delicate tubes are inserted into the filthy rectum or intestine filled with solid, liquid or gaseous material to distend and defile the ureter and the pelvis of the kidney Almost with the same breath the Doctor advises the implantation of the ureters into some portion of the abdominal wall and bring it out on the surface of the skin Just as if the skin were not septic and would subject the ureter to septic infection as well as the intestine, beside placing the ureter in an unfavorable position while the patient is on his back for natural drainage, to say nothing of being occluded by the bowel when the patient is in the erect position

Did it ever occur to the Doctor that the ductus communis choledochus in connection with the pancreatic duct commit the awful crime of discharging their contents into the descending portion of the duodenum? It would appear from the criticisms of Dr Van Hook that even this would be unjustifiable under all circumstances The Doctor seems to have forgotten that there is a law of natural immunity which not only protects us from infection from the septic material of the duodenum which might otherwise cause sickness and death, but protects the other natural channels from the same dangers, and makes it possible for him to make an opening for the ureters through the integument and the patient live, who if it were not for this law of natural immunity would become infected and die

We were not neglectful of the fact that the intestines were septic, but we maintain that it gives the patient a better chance for recovery, especially where only one ureter needs to be implanted It is certainly a much more desirable operation than bringing the ureter out to the surface of the skin and afflicting the patient with a urinary fistula the remainder of his days The chance for stenosis is much greater on the one hand than on the other In fact, there is more liability of stenosis where the ureter is brought out through the intestines and the walls of the abdomen than where it is implanted in the bowel or rectum Where implantation into the rectum is successful, the patient is not disturbed with the foul odors of decomposing urine as he is in the case where it is implanted in the walls of the abdomen or the vagina If I were to make a choice to day between implanting the ureter in the walls of the abdomen or vagina and making a nephrectomy, I should prefer the latter, with the single exception of where there were but one kidney left to operate on, and then it would be folly to perform a nephrectomy and there would be nothing left but to implant the ureter in the walls of the abdomen, vagina, or the intestinal tract To the unbiased mind it seems to me there is no question as to which of these three methods would be preferable It is true in either one if septic infection or stenosis takes place, a nephrectomy can be made afterward but if this is not necessary, where each are successful, there is no question as to the comfort of the patient on one hand and the discomfort on the other

In the case operated on by Dr Leet of Scranton, Pa , where the ureter was implanted into the rectum and the patient recovered from the operation, but died subsequently of an entirely different disease not connected with the operation, I am told the patient suffered no inconvenience from the ureter being implanted into the rectum, and when a post mortem was made there was found to be complete union without consequent nephritis so frequently referred to by Dr Van Hook as the result of septic infection, neither was there stenosis of the ureter itself which he prognosticates as a most probable sequela in these operations

Practical experience is always preferable to hypothetical theory Notwithstanding the severe criticisms offered by Dr Van Hook, on the implantation of the ureters into the rectum, we find in an article by Chaput, published in the *Archives Generales de Medicine*, January, 1894, that this distinguished operator performed this operation upon a patient Sept 13, 1892, in which he states the results of the operation were excellent Fever was entirely absent and the patient recovered without a single complication In speaking of this operation, Deforest, in an editorial published in the *Annals of Surgery* for August, 1894, page 198, says "At the end of a year a comparison of the discharge from the rectum and from the bladder for twenty-four hours gave the following results vesical urine, 1,250 cubic centimeters, urea 24 grams per liter Liquid material eliminated by the rectum, 270 cubic centimeters, urea, 4 5 grams per liter The patient has three liquid movements daily which contain solid matter in suspension These passages are easily retained in the rectum, and there is no discomfort experienced The left kidney is not enlarged and the amount of urine excreted is not abundant The diminution in the amount of urea in the urine of this side is explained by the fact that secondary changes had occurred in the kidney as a result of the contraction of the orifice of the ureter during the existence of the fistula"

On Nov 25, 1892, Chaput again implanted the ureter into the rectum for chronic inflammatory thickening of the bladder Three months after the operation the general condition of the patient was fairly good There were but four or five passages daily The anastomosis of the right ureter with the cæcum was decided upon, and this operation was performed on the first of March, 1893, or about three months after the implantation of the left ureter In this case the ureter was as large as the thumb and its walls were thickened and congested No fever followed the operation, but the patient became comatose and died on the same day, which confirmed the conclusion arrived at by the writer in his experimental work, that the implantation of one ureter was comparatively free from danger but the implantation of both was a hazardous operation Chaput "concludes as a result of this observation that this form of anastomosis is a favorable one, since, notwithstanding the adverse conditions, the operation itself was successful and was free from unfavorable complications either on the side of the kidney or on the side of the intestine The frequency of the discharges from the rectum, which decreased toward the last, is to be attributed to the polyuria existing in a kidney already diseased It is fair to assume that eventually the large intestine would have become sufficiently dilated to act as a reservoir for the urine, and so render the evacuations less frequent"

After briefly reviewing the progress made in the last few years in the surgery of the ureter, we are led without further light, to the following legitimate conclusions

1 That where it is possible, a traumatism of the ureter should be repaired by a plastic operation which has for its object the union of the distal and proximal ends of the ureter

2 Where it is possible to reach the superior portion of the bladder it is advisable to implant the distal end of the ureter into the bladder

3 Where it is impossible to either unite the distal or proximal end or implant the distal end into the bladder, we would advise, as a matter of choice the implantation of the ureter into the alimentary canal, rather than into the vagina or the making of a fistulous opening through the skin

150 East Broad Street

SOME POINTS IN THE SURGERY OF THE URETERS

BY WELLER VAN HOOK, A B, M D

CHICAGO

An interesting work on ureteral surgery[1] has recently been published in Paris The author devotes his entire attention to anatomy, to the methods of exposing the ureter for surgical treatment, to ureterotomy for removal of calculi and for the relief of stenosis, and to resection Inasmuch as he omits the consideration of such important branches of the subject as diagnosis the use of catheterization of the ureters for various purposes and the implantation of the ureters upon the skin, into the intestinal tract and into the bladder, his work must be regarded as a valuable and timely discussion of the topic touched upon, but not as the systematic treatise upon the general subject of surgical ureteral diseases which the title and the size of the volume lead one to expect

The position assumed by the present writer upon a former occasion in reference to the subjects of suturing longitudinal wounds of the ureter and of union of that duct after transverse division, have been adversely criticised, although Dr Glantenay agrees in the main with his conclusions upon other topics

In that article it was shown that unsutured longitudinal wounds of the ureter must heal by granulation, inasmuch as the continual passage of the urine out of the wound would suffice to prevent the accurate coaptation of the edges of the duct necessary to *prima intentio* Provision for the free escape of urine by drainage being presupposed, the abundant connective tissue in the neighborhood of the tube must soon be covered by granulations, to which the duct will speedily become attached The wound edges will then be in position to favor their epidermization, and as no more than normal resistance will be offered to the outflow of urine by the bladder, the discharge of the fluid will soon take place by the natural passages instead of through the drainage tract after the drainage tube is removed Since the mucous membrane strongly tends, during the time the wound is open, to proliferate over the granulations extending from their edges toward the drainage tract, the lumen of the tube after healing has occurred will be, if altered at all, greater at the site of injury, just as the urethra, after external urethrotomy for stricture, has a greater caliber at the site of the longitudinal incision The advantage of surgically utilizing this mode of repair lies in the fact that if scar contraction take place after such healing it must bring about a shortening of the tube rather than a diminution of its caliber

Dr Glantenay holds that we should, as far as possible adopt the suture in dealing with these wounds. There are several manifest objections, however, to the application of sutures to longitudinal wounds The first of these is that the tube is so small and delicate and its situation often so difficult of access that the operation will usually be trying and unsatisfactory. The record of Tuffier's experiments is sufficient proof of this fact if demonstration be required

A second objection is that the needle is liable to penetrate the mucosa of the tube in the course of the application of a number of sutures, and to leave fastened in its lumen a thread upon which calculous deposits may form Should suppuration occur from previous infection of the urine, or from contamination at the time of operation the presence of sutures would be worse than useless, since they would act as foreign bodies, keeping up a purulent discharge, and would also act as centers for the deposit of urinary salts

Beside these objections the sutures must inevitably produce an immediate coarctation of the tube, seeing that they can only close the wound by making tangential traction upon its walls

Dr Glantenay has collected fifteen cases of longitudinal incisions in the ureter, of which five were sutured with silk, the remainder being allowed to heal without stitches Of the five patients in whose cases sutures were placed one died Of the remainder, one had a persistent fistula One patient died, among the ten treated without suture Of the nine which recovered under this treatment, three had temporary fistulæ, a fact scarcely worth mentioning, since the very statement that sutures were not applied would lead us to expect a temporary discharge of urine by the drainage tract One case is also recorded in the table with the remark "guerison, fistule?" Obviously, the number of cases thus far reported is too small for statistical study, yet one is irresistibly impressed with the favorable results in the cases in which sutures were not applied So that Dr Glantenay's arguments are in a measure, actually confuted by his own statistics

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[1] Chirurgie de L'Uretère, par le Docteur Glantenay, Paris J B Balliere et Fils, 8vo pp 291 1895

[2] JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION The Surgery of the Ureters, Dec 16, 1893, et seq

The rare longitudinal wounds of the aseptic ureter occurring in the course of transperitoneal operations must be disposed of by suture, if possible But if the duct is not readily accessible for this purpose, drainage through a posterior incision may be required

Certainly we have much to learn on the subject of longitudinal wounds of the ureter but our knowledge can now be advanced by clinical experience alone Meantime we should be careful to properly estimate the value of the materials already at hand

Dr Konrad Buedinger[3] has recently discussed complete transverse injuries of the ureter, detailing the methods of Poggi and of the present writer for the reunion of the duct after such traumatisms Dr Buedinger tried the method of Poggi upon a dog This method, it will be remembered, consists in the end-in-end invagination of the upper ureteral fragment into the lower To do this by means of a traction suture was found so difficult that he gave up the effort For, in the first place, the invagination would not succeed, since the upper end always slipped out of the lower end as soon as peristaltic action occurred, and, in the second place, the ureter was stretched too much transversely Becoming discouraged with Poggi's method, Buedinger gave up experiments in this line If he had tried the writer's method by lateral implantation of the upper end of the ureter into a slit in the lower portion of the tube, these objections would have disappeared

Glantenay describes the writer's method so fully and clearly that he evidently understands it, but at last discards the procedure utterly, evidently influenced by the paper of Buedinger, since he mentions no experience of his own His sole objection to the method lies in the fear that the invagination suture (by which the upper end of the ureter is drawn into the slit in the side of the lower portion) may be left in the ureter and may form a nidus for the formation of a concretion This theoretical objection is wholly refuted by the fact that this suture does not need to pass through the mucosa of the upper fragment, the muscular and connective tissue layers of the duct being thick and strong enough to give substantial hold for the thread It must also be remembered that the catgut suture would at first be likely to bury itself by cutting deeper and deeper into the walls of the ureter, and later on would be absorbed completely

Glantenay coolly states that the case operated upon by the writer's method by Dr H A Kelly, "does not seem rigorously demonstrative If it proves the harmlessness of the maneuvers which this complex procedure necessitates, its efficacy is not evident to us, for where is the proof of the reëstablishment of the course of the urine by the injured ureter?"

The child-like naivéte of this inquiry almost disarms one Yet perhaps we should take him seriously, especially as he complains that he could not find the detailed report of the case, a statement which would seem to imply that he did not have access to the *Index Medicus* and the *Annals of Surgery* even in Paris The proof which he desires lies in the following facts 1, no urine escaped through the abdominal drain leading down to the site of injury, 2, no accumulation of urine in the peritoneum or symptoms of resorption were noted, 3, a normal quantity of urine was passed and no symptoms of ureteral obstruction occurred

It may be added that Dr Doherty of Georgia, has sent the writer a very brief account of a similar case, in which he accidentally cut the ureter across during a laparotomy and immediately closed the injured duct by the same method His patient recovered without an untoward symptom

103 State Street

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[3] Archiv für klinische Chirurgie Bd XLVIII H 3

THE INFILTRATION METHOD OF ANESTHESIA IN OPHTHALMIC PRACTICE

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md May 7 10 1895

BY H V WÜRDEMANN, M D

Director and Secretary Wisconsin General Hospital Association Oculist and Aurist to the Children s Hospital the Milwaukee County Hospital for Chronic Insane, and to the Elms Hospital Instructor in Eye Ear and Throat Elms Hospital Secretary Section on Ophthalmology American Medical Association
MILWAUKEE, WIS

Just six months ago we brought to the notice of the medical profession our[1] conclusions obtained by following out the line of experiments instituted but a few months before by Schleich,[2] of Berlin, relative to the anesthetic properties of water, and its application in surgical practice The experimental stage has been passed and we are now able to substantiate some of his statements made in our first article which at that time were not yet proved

A brief resumé of Schleich's experiments may be advisable this investigator was employed in research for the production of a better and less harmful method of local anesthesia than that which has hitherto obtained He first experimented with hypodermatic injections of cocain and other drugs, finding that a 2 per cent solution of cocain was the weakest which would produce anesthesia when introduced beneath the skin A couple of syringefuls of this solution would be the toxic dose and such an amount would be necessary in many trivial operations It is well known that cocain injection is dangerous to life and even small quantities of the drug may give rise to very unpleasant symptoms

Our investigator discovered that by injecting the solution into but not under the skin in the surprisingly small quantity of 002 to 1 00 a practical anesthesia would result throughout the whole thickness of the skin and insensibility more profound than that by hypodermatic injection of a solution one hundred times this strength could be obtained The logical deduction followed that the drug itself could not be the main agent in causing the anesthesia Injections of distilled water were tried and produced anesthesia but these were painful, *i e* the infiltration of the water into the skin produced a burning pain which transcended that of the knife Complete anesthesia however, followed the infiltration

Could it be the infiltration alone that produced the pain of injection and later obtunded the sensibility " Injections of the normal salt solution (6 per cent) were made but no anesthesia followed, yet the injection itself was painless The proposition to be solved then was as follows if infiltration of water alone into the tissues produced pain followed by complete anesthesia while the injection of 6 per cent sodium chlorid was painless but made no alteration in the sensibility of the nerve ends there must be between these two extremes a salt solution of a certain strength which would at the same time be so similar to the normal fluid of the blood as to cause little or no pain in infiltration and yet be sufficiently like water to produce anesthesia of the parts so injected Experiments proved that a 2 per cent salt solution met these requirements Solutions above or below these strengths were either painful to inject or produced no anesthesia Operations may be painlessly done by a 2 per cent salt solution I have personally experimented with various fluids the ethers and alcohols are similar to water in that they cause burning pain on injection, followed later by anesthesia Ether however, produces capillary hemorrhage and alcohol coagulates the albumin of the tissues and both substances, aside from this, are too irritative to be of use in this method The various oils are not painful to inject but afford no anesthesia They are usually absorbed without producing material change in the tissues

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[1] Explanation and Demonstration of the Infiltration Method of Anesthesia. JOURNAL AMERICAN MEDICAL ASSOCIATION, Dec [illegible]

[2] Schleich, Schmerlose Operationen Berlin [illegible]

Cocain 2 per cent , morphin 2 per cent , ac carbol 2 per cent , bromid of potassium 3 per cent , methyl violet 1 per cent , caffein 2 per cent , sugar 3 per cent and other substances in aqueous solution were found to allow of the anesthetic action of water upon the nerve filaments The anesthetic drugs, cocain, ac carbol and morphin have a special characteristic i e , their addition in very small quantities to the 2 per cent salt solution prevented the paresthesia incident to injection of simple saline solution and the infiltration of inflamed or hyperesthetic areas could be made without pain

The narcotics were more active when used in the 2 per cent salt solution and could be used in even lower attenuations, for instance, 01 per cent cocain in a 2 per cent salt solution prevented paresthesia It was also found that if the solutions were used cold, their efficacy was increased many fold, and that when used at the temperature of the body, little or no anesthesia followed

The following formulas are advocated by Schleich [3]

R	Cocain mur	20
	Morph mur	025
	Natr chlor	20
	Aqu dest ad	100

M Sterilisat adde sol ac carbol 5 per cent gtt ij
S Solution No 1, strong For operation upon highly inflamed or hyperesthetic areas

R	Cocain mur	10
	Morph mur	025
	Natr chlor	20
	Aqu dest ad	100

M Sterilisat adde ac carbol 5 per cent gtt ij
S Solution No 2, medium For most operations

R	Cocain mur	01
	Morph mur	005
	Natr chlor	20
	Aqu dest ad	100

M Sterilisat adde sol ac carbol 5 per cent gtt ij
S Solution No 3, weak For superficial operations upon nearly normal tissues

At my request, Parke, Davis & Co , of Detroit, Mich , have prepared tablets, triturates and compressed tablets from which these solutions may be extemporaneously made by dissolving one tablet in 100 cubic centimeters (ʒiij) of distilled or boiled water These will be found convenient in practice

All are to be kept strictly sterile, glass stoppers or scorched cotton such as are used in bacteriologic experiments for the bottles, small quantities to be poured out in smaller vessels for each operation Just before operation the solution should be cooled by laying the bottle containing it on ice The common form of hypodermatic syringe with the finest of needles is all that is usually needed Dr Chas Denison of Denver, Colo , has given us an aseptible syringe of larger capacity, with piston packing of asbestos which is particularly applicable for aseptic injection The syringe is kept in good order by being frequently soaked in a 5 per cent carbolic solution and the needle sterilized after each operation

The discovery of these truths so valuable for the question of local anesthesia is due simply to a slight change of method, the application of the solution within and not under the skin The anesthesia is caused by the replacement of the normal fluids of the tissues by a fluid of less specific gravity (the water) which causes anemia, compression and cooling, producing thereby a temporary paralysis of the nerve filaments The pain of the infiltration of indifferent solutions is abolished by the minute doses of narcotic drugs, (morph cocain, carb ac)

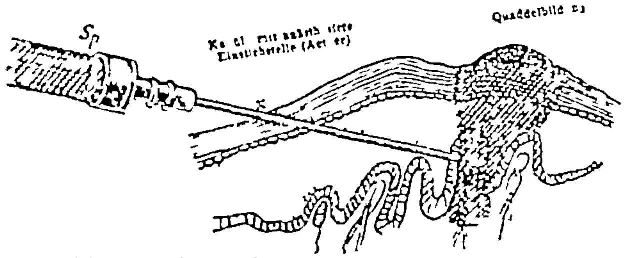

FIG 1 —Diagram of a section of the skin, showing formation of the first wheal

It is perhaps well to here go into the technique of the production of local anesthesia by this method The field of operation is made aseptic in the usual manner Having the required formula, the solution aseptic and cold, we fill the sterilized hypodermic syringe, pinching the skin slightly between the thumb and forefinger of the left hand , the needle is then passed obliquely under the epidermis to the papillæ, intra-cutaneously, until the lumen is fully inserted A few drops are then injected, thereby producing a white elevated wheal, the infiltration extending throughout the whole thickness of the skin (See Fig 1) There is immediate and complete anesthesia throughout the extent of the infiltration which lasts from ten to twenty minutes according to the density of the tissue so edematized The needle is then reinserted at the periphery of the wheal and the area infiltrated to the required extent and depth No tissue offers any deviation from the dictum every structure is made anesthetic that can be artificially edematized , this holds good for skin, mucous and synovial membrane, periosteum, fascia, muscle, lymph glands, nerves, viscera, and even bone

Anesthesia exists only within the area infiltrated by the solution and outside of that, normal sensation remains In operations or or through the skin and mucous membranes the first wheal is increased to the size of a dime by increased pressure on the piston , the needle is moved and re-inserted at the periphery of the wheal, but still within it, and a new wheal raised In this way the line of incision is marked out to any desired length or breadth (See Fig 2) In general surgical operations we would then infiltrate the underlying tissues, by slowly pushing in the needle and injecting a few drops at a time until the deeper tissue is edematized

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[3] The "keeping" qualities of these solutions are improved by the addition of a few drops (gtt jjl) of a 5 per cent solution of trikresol as recommended by Parke, Davis & Co

By cooling the spot selected for the formation of the first wheal by ether or rhigolene spray, or on mucous membranes by touching the spot with a strong solution of carbolic acid or applying cocain, the first injection may be made, if so desired, without even feeling the prick of the needle This is seldom necessary as a very fine needle may be inserted without pain even in very tender tissues such as the eyelids The succeeding injections may now be made without causing sensation There is no sensation to the infiltration proper

Where the tissues are inflamed the sensibility is pathologically increased Here it is indispensable that the infiltration be begun in sound tissue and carried over into the part to be operated upon (See Figs 3-4) The dilated blood and lymph channels of the inflamed skin allow us to anesthetize quite a large spot from one puncture

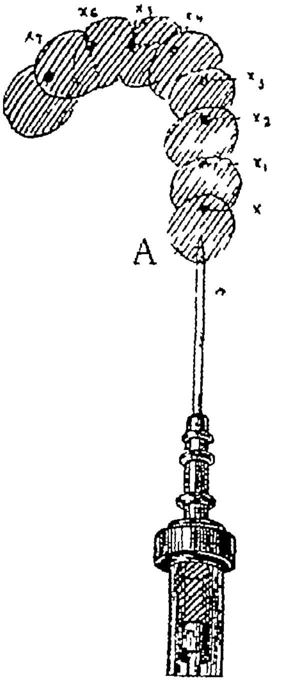

FIG 2.—Formation of the cutaneous wheals A, spot made anesthetic by ether spray for the first injection

The injection should be done slowly at first and when the infiltration - only felt by its tension we may rapidly flood the part to the required extent Under no circumstances must fluid be primarily injected into an abscess, an exudation or a pathologic focus The only result is increased tension and pain We must not lose sight of the cardinal fact that the anesthesia exists only within the area infiltrated by these solutions and that outside of that there is normal sensation The method rests principally on the production of a complete artificial edema of the tissues Wherever we wish to operate with exact anesthesia, the field of operation must be tensely filled with the solution so that it exudes from the cut surface

It should be remembered that our use of attenuated solutions of the narcotic drugs has nothing akin to the doctrine of the followers of the dogma "*similia similibus*," etc These statements may be readily substantiated upon your own persons, as I have done many times on myself and other physicians I need not call to your attention the well known dangers of chloroform and ether anesthesia and the waste of the surgeon's time, the discomfort to the patient, and the necessity for skilled assistance Cocain injection of the solutions of the usual strengths (5 to 10 per cent) is certainly far more dangerous to life than the administration of chloroform The higher solutions of cocain surely diminish the exudative process and retard the healing and, in some cases, actually destroy the trophic filaments so that gangrene has been known to occur Nothing of the sort has been found to result from the infiltration of the solutions recommended in this article Anesthesia is complete and occurs immediately and lasts long enough for almost any external operation There is no objection at any time to repeating the injection if feeling should return during the operation Indeed, we might safely operate for hours upon a small area if so inclined The advantages of the method are also evident from its simplicity, safeness and celerity

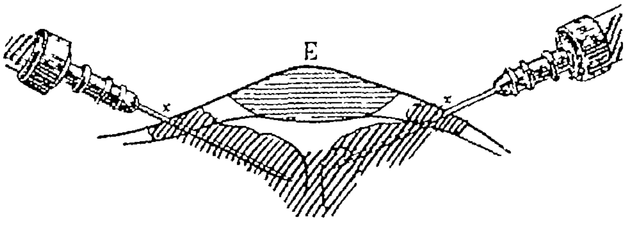

FIG 3 —Infiltration of inflamed surfaces

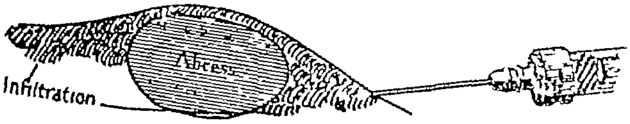

FIG 4 —Infiltration of abscess

The method has gained credence and is now in common use by many busy practitioners Operations have been done, from the removal of ovarian tumors and amputations down to the opening of boils without pain, and with satisfaction both to the physician and patient I have personally done half a hundred operations upon the eyelids, etc , by this form of anesthesia, as well as various operations upon other parts of the body while prosecuting the investigation My first operation was done upon a deep seated felon I have assisted at a number of circumcisions, excisions of tumors, and minor operations, making the injections myself, I have had reports from many surgeons in different portions of the United States of its use for operations varying in severity from ingrowing toe-nail to hernia, in which the anesthesia has been satisfactory Healing has been by first intention and in only three instances have we had reports in which it has been delayed [4]

In the foregoing, I have purposely said little about its use in ophthalmic practice, leaving this to be inferred from what I have said concerning minor surgical procedures in other localities Indeed, infiltration anesthesia is of greater value to the general practitioner and surgeon than to the oculist, as the instillation of cocain into the eye is sufficient for most of our operations. For obvious reasons this method is applicable only to operations in our practice upon the eyelids, etc. The resultant edema would interfere with most operations within the orbit such as enucleation.

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[4] In one of the cases an operation for removal of tumor in axilla the patient used the arm freely after the operation In the other two the patients were scrofulous and healing would have probably followed the same course if a general anesthesia had been given

However, I bring the subject to workers in ophthalmic surgery, believing it will be an advantage to the ophthalmic surgeon for most operations in which instillation of cocain is inapplicable, but which may be deemed too trivial for a general anesthetic and yet are attended with considerable pain. In my practice it is in daily use for chalazia, tarsal tumors, opening of abscesses and plastic operations. For most office operations the Schleich method is an invaluable contribution to our therapeutics. It should do away with the injection of dangerous solutions of cocain and take the place of general anesthesia for many operations.

The technique of the injection was then shown upon the arm of one of the ophthalmologists there present after which by the kindness of Dr. Harry Friedenwald, of Baltimore, a patient was shown with two sebaceous cysts of the forehead. Dr. Würdemann injected the skin covering of this tumor with solution No. 1 and the growths were dissected out by a surgeon without the patient experiencing the slightest pain or feeling either the injection or the operation. Six stitches had to be taken in the wound of the larger, and two in that of the smaller growth.

[illegible] Grand Avenue.

REPORT OF COMMITTEE ON EXAMINATION AND CARE OF EYES DURING SCHOOL LIFE—INSTRUCTION OF TEACHERS AND SCHOOL AUTHORITIES AND LEGAL PROVISIONS.

Read in the Section on Ophthalmology at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md., May 7-10, 1895.

BY B. ALEX RANDALL, CHAIRMAN,

PHILADELPHIA, PA.

Mr. Chairman and Gentlemen:—Your Committee in approaching the subject assigned to them find themselves of one mind in advocating advance in this important field of preventive medicine, but can less easily concur upon the exact lines within which they deem it practicable to advise action at the present time. Located in cities of various sizes and widely separated portions of the country, the environment of each member must react distinctly upon his view of what it is judicious to attempt, for it is practically self-evident that the popular mind is but little prepared for any active steps in the matter, and that it will be very unwise to take a position too advanced to secure the indorsement of reasonable men, medical and lay. Public opinion alone can carry this project through, and even in the profession—nay, even among our ophthalmic colleagues—this opinion has still largely to be shaped. Our steps must be guarded, therefore, yet they need not be timid nor indecisive. We must form the advance guard, sure that the rank and file will lag behind the standard which we place before them, however wisely chosen. Let us look, then, not for our idea of the maximum now everywhere practicable, but rather for the minimum that can be held efficient and satisfactory.

The opposition likely to be encountered in our efforts to advance the cause will come primarily, perhaps, from professional jealousy rather than from school inertia or individual restiveness and assertion of freedom. That too many men intrusted with such investigations may try to coin profit to themselves from them, must be conceded; yet we contend that still more men of the first rank will refuse, or will hesitate to accept, such a trust because of the unworthy motives likely to be gratuitously imputed to them. In our noble profession there are hundreds capable and willing to take up this or any other self-sacrificing task with no thought of personal exploitation—finding their sole rewards in the knowledge thus gained and the beneficent work accomplished. There may be exceptions among those who have already wrought in this field, but we know of none. Yet any one of us in offering to do such work in his own community gratuitously, much more if claiming compensation, would be very careful to whom he broached his proposition, knowing how probably he would be misconstrued.

Let us deal frankly and fairly with this matter, individually leaving its execution wholly alone, if we have not the interest or can not afford to undertake it without more compensation than is likely to be given—and leave others unhampered by any insinuation of baser motives in being willing to carry forward the needed work.

The next line of obstruction is to be found in the school authorities. The cramming process now in vogue demands more time than can be found, so they will grudge every minute that is given to medical examinations. Ill-paid as are most of our teachers, they will at times demur to taking more work on their shoulders, or that any of the scanty school funds should be diverted to paying medical examiners. School discipline is apt to suffer in being broken in upon by such investigations; and some will fear, like the parents, lest we "put notions in the children's heads." An officially constituted group of "lame ducks" for whom forward seats, special illumination or lightened burdens would be required, is an incubus from which some would gladly escape.

Yet it is but just to another noble and valuable class in our midst to insist that the great majority of teachers will cheerfully, if not enthusiastically, hail the promise of better ocular hygiene for their pupils and make any reasonable sacrifice to do or to permit the good work. As a body they will welcome any system which will enable them to do all they can to obviate or relieve danger to their little charges. This spirit should be fostered, and they should be given test cards and taught how to use them and make other examinations within their scope; for much—all that is possible for some localities perhaps—can be thus done through the agency of the teachers.

The scholars and their elders will occasionally offer opposition, regarding such examinations as invasious of their liberties. This will rarely occur unless provoked by some indiscretion or arbitrary order of the examiner or school authorities. Yet it can be avoided only by the most scrupulous bearing on the part of the investigator, not only in setting such a study on foot, but even when it is apparently progressing most favorably. An unwilling pupil may be gently ridiculed and passed over until in better frame of mind; any coercion is likely to prove disastrous in these delicate positions. The examiner should even be very cautious as to any leading questions and very chary of remarks as to his findings, generally declining to report in any but the official form. This had better be in a concise untechnical statement to the school authorities of the vision of each eye, the character of any refraction error and, in the needful cases, that medical aid should be promptly sought, leaving them to transmit it to the parents Unless officially charged with such a duty, the examiner will be wise to refrain from all prescribing

When an examination has been authorized, how, where, and by whom shall it be made? We may look forward with hope to a time, not probably in this century, when the new pupils will present themselves for examination, physical as well as mental, before the school opens in which they desire to be enrolled For the present, we will do well if we secure the investigation of those accepted and beginning their school work For the examination of these, suitable accommodations at the school itself should be perfectly practicable, and with the needful appliances duly arranged, the study can there be made with the minimum cost of time to examiner and scholar

Many of the medical examinations thus far made could have been as well, if not better done, by an intelligent layman Little practice is needed to fit one to measure the acuity of vision The prime requisite in this and other tests, is the conscientious carrying out of the routine, and in this medical examiners may be as faulty as laymen So too as to the choice of astigmatic lines, the testing of the color sense and even taking the range of accommodation Pennsylvania railroad clerks do this very efficiently under the system devised by Dr Thomson Tests of the refraction with spherical glasses and of the muscles with prisms are rather beyond most laymen as indeed beyond most non expert physicians Ophthalmoscopy and ophthalmometry demand the highest skill of the oculist

What then shall we attempt? Shall we test vision at four feet and seek H with a + 1 lens and then set down as emmetropic and normal, all not thus proved ametropic? Such a piece of work by one ranking as an authority, is probably more quoted than any other study yet made As well record as all-sufficient, *statements of the pupils themselves!* Thus much the teachers will probably do more patiently than a physician

Every simple means of learning the real and important conditions of the eyes should be utilized since no single examination can possibly be infallible, and we might easily fail to learn the most fundamental facts if we slur our work at all A study as complete as we give to a puzzling case in private is none too elaborate, for we ought to test the color-sense as well as the vision for far and near, the muscle relations and the accommodation, and determine the refraction and eye ground conditions Field-taking can generally be omitted, and, although well used in some of these studies, ophthalmometric measurement of the cornea may be more scientific than practical

Possession of normal visual sharpness does not at all assure present comfortable use nor future safety, any more than defect of distant vision proves myopia We must know as accurately as possible what is the refraction, and test the power of the external muscles and of the accommodation, in order to know how the vision is attained and what are its chances of being maintained Nor will this suffice, for health of the intra ocular tunics is essential for good function, and we waste one of our best means of forestalling danger if we ignore the ophthalmoscopic showing as to the eye-ground Probably we can do no better than follow the scheme used by Risley in the Philadelphia schools fifteen years ago, slightly modified by Randall and employed in his work at the University of Pennsylvania and in the William Penn Charter School, as reported to this Section in 1892 Part of the work can be done by assistants, who need not be medical, just as the employes of the railroad are examined by clerks in the superintendent's office under Dr Thomson's plan, the methods and results being under the control of the examiner-in-chief, who can largely confine his labors to the strictly expert procedures Making and recording all the steps himself, the ophthalmologist can easily study from a dozen to twenty scholars in an hour—and division of labor can double the number Hence two hours a day for a month or two, would suffice for the examination of a thousand pupils, at only such cost of time and effort as most of us habitually give to our clinics

While few of us may feel moved to inaugurate such studies, in which we should be unhonored laborers and the targets of unfriendly criticism, many would feel in duty bound to consider, and probably accede to, a request from the constituted authorities to undertake such work, even though no honorarium were attached Many a study has been thus made in the interest of ocular hygiene, and we must look to this as a needful course in many instances in the future, before this matter is placed upon its proper footing There is evident limit, however, to the possibility and desirability of this, and equity demands that compensation, in small amount at least, should be offered in acknowledgment of the service This can not often be made more than a mere honorarium, which may induce the best men to accept the duty and thus exclude the unscrupulous, who would try to profit illegitimately by these appointments One hundred dollars for each thousand examinations made, should be well within the financial possibilities of the school authorities and yet a fee not unworthy of acceptance for a month or two of public work It would bring an expense of $12,000 to $15,000 to Philadelphia annually, but that is little more than Boston is now paying for medical inspection of her schools, merely to guard against infectious diseases, with such a study as we have outlined only in the dim background of the future Like the vaccine physician and other sanitary workers, the school physician must expect but nominal remuneration, especially while trying to convince the public of his disinterested motives in advocating examinations of the eyes in the schools

The details of the examination should be recorded on forms spaced for record of the date, school and class, the name, age and sex of the pupil, the report as to the general health as well as that of the eyes, with note of objective evidences of inflammation of lids, conjunctiva, cornea or tear-passages, squint, photophobia, etc , the visual acuity (stating test and illumination, when unusual), and choice of astigmatic lines at a distance and the near point of accommodation (with far point when limited), the muscle balance by Maddox rod for distance and Graefe test or pen point for near, the color sense by Holmgren's worsteds for each eye, the refraction by retinoscopy and direct ophthalmoscopy, with note of the eye-ground conditions, elaborated perhaps by lens tests with sphericals in fixed series for retinoscopy and manifest measurements. To this we should add mensuration of length of leg, thigh, back and elbow height in relation to proper seating.

B. Alex Randall, Philadelphia, Chairman,
W. F. Southard, San Francisco,
H. B. Young, Burlington,
A. R. Baker, Cleveland,
G. H. Price, Nashville,
Committee.

THE IMPORTANCE OF MINOR CHOROIDITIC CHANGES, ESPECIALLY CONUS

Read in the Section on Ophthalmology, at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md., May 7-10, 1895.

BY B. ALEX RANDALL, M.D.

PHILADELPHIA, PA.

Among the hundreds of thousands of eyes that have been examined more or less carefully in the schools as to their refraction, but a few thousand have been even looked at with the ophthalmoscope, and only a few hundred studied with reference to the pathologic changes in the eye grounds. Search for the causative factors in the production and increase of axial distension has led to great elaboration of many phases of the subject, yet this really fundamental one has been commonly neglected. Loring and Derby, Kopps, Scheiding and a few other investigators have recorded the frequency of conus, and Paulsen has also noted its direction in seafaring men, to learn if their frequent upward gaze made them specially prone to conus downward. But few have studied, like Risley and myself, the general normal or unhealthy condition of the fundus in its bearing upon changes of the refraction in actual progress.

This matter in its relation to general ophthalmic practice as well as in school examinations, is worthy of far better attention. In the routine recording of almost every case, the condition of the nerve margins the macula and the general eye ground should receive careful scrutiny and record. I have heard this laborious detail on the part of some Philadelphia men strongly criticised as superfluous by men trained in the best foreign clinics and returning to instruct their countrymen. If Hirschberg, Landolt, Fuchs, Nettleship and others do this only in exceptional cases, why should we do otherwise? Another question may serve as answer. When the ophthalmic world regards myopia as a condition commonly, nay usually, progressive, why are progressive cases rare in the practice of these over-minute Americans?

That the macular region should habitually be closely studied, few will question, although some of the journal articles about it seem akin to old ophthalmoscopic hand-book statements that "some observers *claim* to have seen the macula in life."

The facility, if not indeed the practicability of such study is less to those who make little use of mydriatics or who accept failure in such scrutiny before they have even attempted it. Those who practice it whenever at all possible, will be well rewarded. Not only will many cases of renal disease be thus detected long before the usual symptoms have attracted attention, but many peculiar minor lesions will be noted, of which the meaning is not yet so clearly understood. Yet lesions in this region of supreme importance can not be too *early or* carefully investigated. Hirschberg asserted not long since that the *majority* of senile eyes showed gross alterations at the posterior pole in a way that suggested that he had not long been as familiar as he should have been with these lesions, nor examined enough eyes carefully to have learned how many are totally free from them.

As to the "conus" and crescent formation at the nerve margin, much as has been done and written for its elucidation, there is great need for farther and better study. Little advance has been made since von Jaeger's investigations a quarter century ago, although many a backward step has been taken, which has complicated the matter for later students. Some deny, like Stilling, that there is an inflammatory element in its causation, regarding the white crescent more or less exposed, as a glimpse into the distended nerve sheath. Yet daily observation teaches us that this is rarely true, and that the common changes at the nerve margin have no *certain* relation to the distended nerve sheath and other gross posterior alterations. We have most of us seen these crescents appear as orange-red areas where there was little pigment-heaping to obscure the process, and, perhaps have seen them disappear with quite the same rapidity. Those who have failed to make verbal or pictorial note of this, have doubtless distrusted their observations, for hardly any one has written about it. More often the change has been in the absorption of the pigment ring, both at the outer and inner margin, and this becomes broken, gray, double-ridged, then semi-atrophic and before the cycle is completed by its full atrophy and uncovering of the sclera, the process is being repeated in one or more crescents beyond the first. Three and sometimes four of these crescents will be seen in one eye, revealing at one glance the steps of the change, the outermost being fairly recent and perhaps still amenable, like any other choroiditic patch, to treatment by mydriatic rest and alteratives. That they are generally of inflammatory nature can be doubted by few close observers, too often they have passed unstudied if not noted, and their significance has been lost sight of. At the inner margin, the double ridged gray crescent is regarded by Nagel as a *supra-traction* of the choroid, such as v. Jaeger described and drew in his "*Einstellungen*," and Weiss has demonstrated in myopic eyes. This is quite clearly the case in a few instances, and the curvilinear nasal reflex of Weiss, to which I have several times called attention, is present to show the distorted prominence of the locality. Yet any one who will sketch a few thousand eye grounds will find his portfolio, like mine, more stocked with exceptions than instances of most these ill grounded *theories*.

Transparent as is the normal retina, its fibers are usually visible to close study along the larger vessels above and below the disk, while weak illumination will make still other of its structures apparent around the margin. The increase of this opacity is very marked in some cases of retinitis, but short of this, we may have many undefined grades of haze which belong, like the exaggerated striation, to conditions better termed irritative than inflammatory. This phrase should not imply that they are not due to true low-grade inflammation. It marks in the usage of some men, that they have little tendency to progress into the serious infiltrated and extravasating lesions which we commonly associate with the name retinitis. Usually accompanying the minor retinal alterations are parallel changes in the choroid, due to little more perhaps than hyperemia, yet generally quite recognizable The delicate stipple of the retinal pigment layer is lost in the flushed appearance that Risley has well likened to canton flannel Let this long persist unrelieved, and absorption will become evident, which lays bare the larger choroidal vessels and heaps the pigment in their interspaces Most juvenile eyes, even in brunettes, show in the periphery some uncovering of the choroidal circulation, and in blondes this almost attains the albino type But it is quite another thing to find visibility of the vessels of the choroid near the disk, and clouds of pigment heaping in the stroma between them, mark the pathologic nature of the process There should be as little question as to the meaning of the picture, in these commonly ignored cases, as in those where it forms part of most serious processes

The apparent vascularity of the nerve-head has wide variations within normal limits, depending largely upon the size and depth of the central excavation, the visibility of the scleral ring, the size of the pupil and even the refraction One can at times see his own optic disk flush under the irritation of prolonged autophthalmoscopy, and realize that similar fleeting variations are often presented to his study With any persistent hyperemia there is apt to be a visible distension of the lymph sheaths surrounding the retinal vessels and pulsation, often very striking, in the large retinal veins No single feature of this may be beyond possibly physiologic limits, yet the complex is one that should be unmistakable to the careful ophthalmoscopist Slight tortuosity of the smaller vessels may be indistinguishable from their normal sinuous course, but this aberration can not seldom be actually followed through every stage up to that of marked neuro retinitis, in cases where eye strain from refraction error seems the only assignable cause The configuration of the disk, with the form of its *porus* and the trend of the vessels on and near it and the other features of what Thomson has termed "drag," also deserve distinct note, as furnishing evidence that the tissues near the pole are actually undergoing the plastic changes for which the hyperemic softening has prepared them

Minute observation and note of the conditions of margins and excavation of the nerve, the trend of the vessels, the absorption of the choroid ring and the general hyperemia and pigment disturbance of the eye-ground, repeated at intervals, will generally demonstrate progressive changes about the posterior pole and serve to explain why the patient suffers so much asthenopia in the process Sketches, however rude, can give accurate portrayal of the proportions of disk, vessels, *porus*, crescent, etc , and serve better than any verbal note to make evident the changes from time to time And this not only in eyes progressively myopic or other cases of changing refraction, but in a few where the hypermetropic refraction remains unaltered And in the cases of progressive myopia, a group to which Risley has called attention, will be brought more clearly forward, in which no alterations appear at the posterior pole to indicate staphyloma there, while the marked choroiditic disturbances at the equator mark this as the site of the stretching which is lengthening the optic axis

1806 Chestnut Street

A STUDY OF THE REFRACTION OF SEVENTEEN HUNDRED EYES

Read in the Section on Ophthalmology, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md May 7 10 1895

BY H BERT ELLIS, M D
LOS ANGELES, CAL

The question of refraction is one that plays no unimportant part in the daily work of many oculists in our large cities, and of most oculists in our medium and smaller cities With many it forms the great bulk of their work

I present for your consideration to day in tabular form, a study of the refraction of 1,700 eyes, representing 869 patients taken from the last 1,000 consecutive eye cases coming under the care of the writer in his private practice Of the 131 cases not incorporated in this study, some were infants with various inflammatory troubles and some operative cases, five only being presbyopes with emmetropic eyes Thus you will see that about 87 per cent of all my eye cases required correction of ametropia Dr Geo M Gould in a paper on these very lines, read before this Section in 1891 said that 93 per cent of his eye patients required correction of errors of refraction If, therefore, from 85 to 95 per cent of all eyes that come under the oculist's care need errors of refraction corrected, it will be wise for all of us to give the subject some little consideration

Of the 869 patients whose eyes form the basis of this study, 613, 70 per cent, were females, and 256, about 30 per cent, males, a proportion of nearly 2 5 to 1 The same general laws underlie this disproportion between the sexes in ophthalmologic practice that cause a similar disproportion of males and females in other branches of medical work, *e g*, among the women we find less general vigor, less active life, with closer confinement, more constant and finer work in the application of the eyes, and last but not least a more sensitive and high strung nervous mechanism

Although 19 per cent of the patients were presbyopic, no account is taken of the presbyopia in these tables In 66 per cent of the patients under 40, a mydriatic was used, ordinarily I employed ophthalmic disks composed of homatropin and cocain, of each 1-50 gr, to produce mydriasis Where the use of three or four of these disks in each eye within a period of one and a half hours failed to quiet accommodation, I used a few drops of an atropin solution, 4 grs to the ounce, in each eye four times daily for three days I have, however, had but few cases in which I have had to resort to this method I have left out of this study all aphakic eyes, and all eyes in which disease of the refracting media or fundus had impaired refraction In the preparation of my tables I followed the same general plan adopted by Dr Gould in his paper of four years ago

I have in Table 1 given the general refraction of 1,700 eyes, 1,371, or a little over 80 per cent, were hyperopic, 282, 16 59 per cent, myopic, while 17 were myopic in one diameter and hyperopic in the other Of my hyperopic cases, I found only 16 per cent with simple hyperopia, 84 per cent had astigmatism simple or compound, the simple astigmatism amounting to 37 per cent of all the hypermetropia Among the myopic patients we find very nearly the same proportion, 17 per cent of simple myopia "2 per cent of simple myopic astigmatism and 51 per cent of myopia with myopic astigmatism

Table 2 gives the amount of hyperopic correction in 867 eyes but does not include the astigmatism It will be noted that 12 per cent of the eyes had hyperopia of 0 50 D or less and 31 per cent had less than 1 75 D The eyes having hyperopia combined with astigmatism outnumbered the simple hyperopic eyes more than 3 to 1 Although the table shows so large a number of eyes with small hyperopic errors, it must not be supposed the total error was correspondingly small because with small amounts of hyperopia, I frequently found large amounts of astigmatism

Myopia is classified in Table 3 In comparison with the hyperopic table, we find only 31 per cent of the eyes have errors of 0 50 D or less, against 12 per cent of the hyperopic eyes, and 62 per cent against 81 per cent with errors less than 1 75 D On the other hand, it will be seen that over 21 per cent of the myopic eyes have between 5 50 D and 22 D of error, while less than 2 per cent of the hypermetropic eyes had corresponding errors

Of the 1,700 eyes whose refraction was measured, 1,434 were astigmatic, but in 47 of these the astigmatism was mixed, and I have consequently given them a table by themselves The varying amounts of astigmatism in the remaining 1,387 eyes is given in Table 4, 1,158 of the eyes, 83 per cent, had hypermetropic astigmatism In 72 per cent of all the astigmatic eyes the error was less than 0 75 D, while 92 per cent of the eyes had errors less than 1 75 D 193 of the eyes had only 0 25 D of astigmatism and yet I found it both wise and expedient to correct the greater number of these small errors As we would naturally expect, we find relatively a large number of small degrees of hyperopic astigmatism, and proportionately large errors of myopic astigmatism, for instance, 20 per cent of the myopic astigmatic eyes had errors above 2 D, while only 3 per cent of the hyperopic astigmatic eyes had correspondingly large errors

The axes of the 1,434 astigmatic eyes are classified in Table 5 I have used the term unsymmetrical, in a somewhat narrow sense and not with its usual significance In Table 5, unsymmetrical simply means the departure of the axis of any given eye from 90 or 180° without reference to the axis of its fellow, excepting where the axes of the pair is symmetrical Under axis 90°, I have included every eye having its axis so placed, irrespective of the fact of the fellow eye having no astigmatism, or the axis at 180° or some oblique angle, and, similarly, all axes at 180° are placed together, 55 per cent of all astigmatic eyes had their axes at 90°, while 25 per cent had them at 180°, leaving only 20 per cent with oblique axes Among the hyperopic astigmatic eyes, 62 per cent were according to rule at 90°, and 20 per cent contrary to rule at 180°, while in the myopic table only 51 per cent are according to rule at 180°, and 24 per cent against the rule at 90° The unsymmetrical cases were relatively more numerous among the myopes

The unsymmetrical axes or those varying from 90° and 180° are grouped in Table 7, and it will be seen that, among the hyperopic eyes, 49 per cent of the unsymmetrical eyes had their fellow eyes with astigmatism at 90°, and 12 per cent at 180°, and in the myopic division 9 per cent had fellow axes at 90°, while 21 per cent had them at 180° Of the 201 unsymmetrical eyes, 52 per cent have the axis of their fellow eye at 90° or 180° In studying the deviation of the axes from 90° and 180°, I find no definite rule, but simply a tendency of the hyperopic axes to be near 90°, and of the myopic axes to depart but little from the horizontal diameter For instance, thirty six of the hyperopic astigmatic eyes had their chief diameter at 75°, twenty-four at 105°, thirteen at 60°, and seventeen at 20° Seventy per cent of these hyperopic variations diverged within 30° of the perpendicular diameter on either side In the myopic variations, six were at 165°, seven at 150°, seven at 15°, and twelve at 30°, while 65 per cent were within 30° of the horizontal diameter, which is in accord with the ordinary teaching In Table 5, the axes of all my astigmatic cases were given, but in Table 4, the refraction of forty-seven eyes, the mixed astigmatic cases, was omitted The refraction of these forty-seven eyes, expressed in terms of crossed cylinders, is given a table by itself We have, however, no particular lesson to draw from it, or point of interest to call to your attention, excepting a fact, which the table itself does not show, and that is, that it required but weak glasses to make the correction in the greater number of these eyes

TABLE 1—GENERAL REFRACTION—1700 EYES

	Eyes	Per cent of H	Per cent, of all
Simple hyperopia	218	15 90	12 82
Simple myopic astigmatism	504	36 76	29 65
Hyperopia plus hyperopic astigmatism	649	47 31	38 18
	1,371	100 00	80 65
		Per cent of M	
Simple myopia	48	17 05	2 82
Simple myopic astigmatism	89	31 56	5 24
Myopia plus myopic astigmatism	145	51 41	8 53
	282	100 00	16 59
Mixed astigmatism	47		2 76
	1 700		100 00

TABLE 2—REFRACTION OF 867 HYPEROPIC EYES, ASTIGMATISM NOT INCLUDED

D°	H	H Ah	H H and Ah	Eyes	Per cent of H	Per cent of all
1-4	8	112	120	364	41 98	21 41
1-2	68	176	244			
3-4	31	91	125	239	27 56	14 06
1	5	79	114			
1 1-4	21	52	53	98	11 30	5 76
1 1-2	9	36	45			
1 3-4	7	10	26	50	5 77	2 94
2	6	18	21			
2 1-4	1	10	14	53	6 18	3 12
2 1-2	2	11	13			
2 3-4	1	11	14			
3	4	8	12			
3 1-4	1	4	5	28	3 23	1 65
3 1-2	7	7	14			
4	4	5	9			
4 1-2	3	13	16	20	2 30	1 18
5	0	4	4			
5 1-2	1	3	1	15	1 78	88
6	8	3	6			
7	1	1	2			
7 1-2	0	1	1			
8	0	2	2			
	218	619	867	867	100 00	51 00

In Tables 8 and 9 are given respectively, tabulated statements of "ocular reflexes" and "reflex neuroses of possible ocular origin" occurring in the 869 cases of refraction which this paper includes That Table 8 shows a total of 1,467 cases is explained by the fact that two or more of the symptoms frequently occurred in the same individual Distress from reflected light I find to be the most common ocular reflex complained of, while aching or pain in the eye was not infrequently mentioned, and blepharospasm and blepharitis were quite common There were ninety seven cases of marked conjunctivitis and seventy eight cases of excessive lacrymation Of the symptoms in the reflex neuroses of *possible* ocular origin, I can only say I have emphasized possible, and will only add that they existed singly, in pairs and sometimes *in toto*, but to say that they all arose from eye strain is far beyond my desire That many of them were of ocular origin I have but little doubt, and this is especially so in regard to the headaches which existed in 527 cases, about 60 per cent of the patients All headaches are not of ocular origin, errors of refraction uncorrected do not always produce headaches, but having found an error of refraction with headaches, especially of the fronto-temporal variety, following the use of the eyes, we have not room to doubt the wisdom of correcting the error The variety of headache finds its classification in Table 10 The fronto temporal is by far the most common variety, occurring in 40 per cent of all headaches Frontal, becoming occipital, is found in 16 per cent of the headaches complained of and the primary occipital occurs in 11 per cent of the cases

TABLE 3 —REFRACTION OF 193 MYOPIC EYES ASTIGMATISM NOT INCLUDED

0°	M	M Am	M M and Am	Eyes	Per cent of M	Per cent of all
1-4	0	15	15	56	30 57	3 47
1-2	11	33	44			
3-4	5	11	16	42	21 76	2 47
1	9	17	26			
1 1-4	3	4	7	18	9 38	1 07
1 1-2	2	9	11			
1 3-4	1	6	7	14	7 25	82
2	1	6	7			
2 1-4	0	1	1	6	3 11	35
2 1-2	2	0	2			
3	1	2	3			
3 1-4	0	1	1	10	5 18	59
3 1-2	0	5	5			
4	0	4	4			
4 1-2	0	2	2	3	1 56	17
5	0	1	1			
6	3	2	5	41	21 24	2 41
6 1-2	0	1	1			
7	2	0	2			
7 1-2	0	4	4			
8	0	4	4			
8 1-2	0	3	3			
9	1	3	4			
10	2	0	2			
11	0	2	2			
13	2	2	4			
14	3	0	3			
16	0	1	1			
18	0	3	3			
20	0	2	2			
23	0	1	1			
	48	145	193	193	100 00	11 85

TABLE 4 —REFRACTION OF 1 387 ASTIGMATIC EYES

0°	H As		M As		M As and H As		Per cent. of H As	Per cent of M As	Per cent of H As and M As
1-4	460	900	34	97	494	997	78 06	41 45	71 88
1-2	440		63		503				
3-4	102	153	82	59	184	212	13 27	25 21	15 28
1	51		27		78				
1 1-4	20	44	7	17	27	61	3 81	7 27	4 40
1 1-2	24		10		34				
1 3-4	6	21	6	16	12	36	1 82	6 41	2 60
2	15		9		24				
2 1-4	7	22	5	33	12	55	1 91	14 10	3 97
2 1-2	9		9		18				
2 3-4	0		4		4				
3	6		15		21				
3 1-4	1		1		2				
3 1-2	6	16	3	5	9	15	87	2 14	1 08
4	3		1		4				
4 1-2	1		1		2				
5	1		5		6				
5 1-2	0	3	1	8	1	11	26	3 42	79
6 1-2	0		1		1				
8	1		0		1				
	1,153		234		1,387		100 00	100 00	100 00

TABLE 5 —AXES OF 1,434 EYES

Hyperopic	Eyes	Per cent of H As	Per cent of all
Axis 90° including all 90°	741	62 01	51 67
Axis 180° including all 180°	240	20 08	16 74
Symmetrical not 90° nor 180°	66	5 52	4 60
Unsymmetrical	148	12 39	10 32
	1,195	100 00	83 35
Myopic		**Per cent M As**	**Per cent of all**
Axis 90°	57	23 85	3 97
Axis 180°	121	50 63	8 44
Symmetrical	8	3 35	56
Unsymmetrical	53	22 17	3 69
	239	100 00	16 66
	1,434		100 00

TABLE 6 —REFRACTION OF 47 MIXED ASTIGMATIC EYES, EXPRESSED IN TERMS OF CROSSED CYLINDERS

0°	H As	Per cent of H As	M As	Per cent of M As
1-4	11	23 40	17	36 1[illegible]
1-2	14	29 79	8	17 02
3-4	4	8 51	8	17 02
1	3	6 38	7	14 89
1 1-2	5	10 64	3	6 38
1 3-4	1	2 13	0	0 00
2	1	2 13	0	0 00
2 1-4	3	6 38	1	2 13
2 1-2	1	2 13	0	0 00
2 3-4	1	2 13	0	0 00
3	2	4 25	0	0 00
3 1-2	1	2 13	3	6 38
	47	100 00	47	100 00

TABLE 7 —AXES VARYING FROM 90° AND 180°—201 EYES

Hyperopic	Eyes	Per cent of Unsym H Axes	Per cent of all Unsym Axes
One axis 90°	72	48 65	35 82
One axis 180°	17	11 49	8 46
Both axes the same not 90° or 180°	2	1 35	1 00
Sundry not in the above	57	38 51	28 36
	148	100 00	73 68
Myopic		**Per cent of Unsym M Axes**	**Per cent of all Unsym Axes**
One axis 90°	5	9 44	2 49
One axis 180°	11	20 75	5 47
Sundry not in the above	37	69 81	18 41
	53	100 00	[illegible] 37
	201		100 00

TABLE 8 —EYE STRAIN WITH OCULAR REFLEXES—869 CASES

Symptoms	No of Cases	Per cent of all Cases
Aching or pain in eyeballs	333	19 [illegible]
Partial ptosis	6	35
Blepharitis, styes chalazion etc	108	6 23
Blepharospasm	189	11 12
Conjunctivitis marked	97	[illegible] 71
Lacrymation	78	4 50
Photophobia and } direct	174	10 [illegible]3
Distress from light } reflected	482	2[illegible]
	1 467	8[illegible] 1[illegible]

TABLE 9 —REFLEX NEUROSES OF POSSIBLE OCULAR ORIGIN

Symptoms	Cases	Per cent of Neuroses	Per cent of all Cases
Headaches	527	60 [illegible]	31
Insomnia	49	5 6[illegible]	[illegible]
Dizziness	99	11 4[illegible]	[illegible]
Mental symptoms loss of memory etc	8	[illegible] 70	[illegible] 41
Morbid nervousness	127	14 [illegible]	[illegible]
Blind spells	6	[illegible]	[illegible]
	867	100 00	51

It will be noted that reflected light forms a very large percentage of complaints among the ocular reflexes This is without doubt a greater factor with us in Southern California than in the other parts of the United States, accounted for solely by the fact that we have very white roads and streets, accompanied by about three hundred bright sunshiny days each year When correction of the error of refraction fails to relieve this distressing symptom, I have found that greater relief is given by light blue than London smoked glasses

107 North Spring Street

SYMMETRICAL AND ASYMMETRICAL MERIDIANS OF THE CORNEA IN ASTIGMATIC EYES

[illegible] Ophthalmology, at the Forty-sixth Annual Meeting of the American Medical Association at Baltimore, Md, May 7-10 1895

BY S D RISLEY, M D, AND JAMES THORINGTON, M D
PHILADELPHIA PA

Much practical interest attaches to the symmetrical and asymmetrical direction of the principal meridians of corneal curvature in astigmatic eyes My attention has been directed anew to the subject by the interesting papers of Drs Knapp and Harlan, (Trans Am Oph Soc 1891) and by some recent studies of my own on the relation of asymmetrical meridians in the cornea and different grades of refraction error in the two eyes, to cases of abnormality of ocular balance (*University Medical Magazine*, January, 1895) That these asymmetrical conditions give rise to the more severe forms of asthenopia can not be questioned I have repeatedly brought forward statistics to show that emmetropia must be regarded as the standard refraction for the model eye, since emmetropic eyes and those which most nearly approximate this ideal state of refraction, bear the requirements of civilized life with a minimum of discomfort or peril If this is true, eyes which do not conform to this standard are to be regarded as anatomically defective It is a curious fact that these congenitally defective eyes should in so large a percentage of cases seem to fall under the operation of some law of symmetry It has long been observed that in a large percentage of astigmatic eyes the meridian of shortest radius for each eye is either directly vertical, i e, 90° from a horizontal line, or symmetrically disposed to the vertical axis of the body Knapp found this to be the case in 84 per cent and Harlan in 70 14 per cent This fact awakens the most interesting inquiry regarding the anatomic conditions which determine it and also as to those which give rise to the very frequent variations Any satisfactory answer, however, to such inquiries is extremely difficult to obtain

Observations of certain anomalous conditions which obtain in cases of anisometropia with high grades of asymmetrical astigmatism seem to justify the belief that the form of the eyeballs is in great measure determined by the size of the bony orbits, and that the orbits are in turn modified in their various diameters by the abnormalities in the form of the skull It is obviously difficult to secure the required data as to the form of the eyeballs in any given series and to subsequently measure the diameters of the orbits in the same individuals, but, a cursory inspection of a small number of dried skulls has shown me great variation in the measurements of the diameters of the orbits, that these variations were only a part of certain well defined deformities in the diameters of the skull, and that the abnormalities in the orbits were associated with anomalous conditions in the bones of the face and nasal fossa The purpose of the present study is to show to what extent these anomalous forms find expression in asymmetrical conditions in the direction of the principal meridians of curvature as expressed in astigmatic eyes The present paper presents but one phase of the subject I have observed in a number of patients presenting a wide difference of refraction in the two eyes, with high astigmatism in one and much lower in the other, and with asymmetrical meridians, that the condition was associated with a well marked difference in the two sides of the face In a few instances the general deformity of the skull could be demonstrated by the hatter's form While the relation between these conditions and the ocular anomaly may seem quite obvious in marked cases of deformity, it is more difficult to demonstrate any association in minor degrees of error, nevertheless they suggest not only the probable etiology of the astigmatic eye and its asymmetries, but also the probable origin of many cases of absolute abnormality in the ocular balance

The following tables are based upon the analysis of 2,500 pairs of defective eyes, 1 300 from the records in my private case-books and 1,200 from the Wills Hospital records In both the cases were taken without selection in the reverse order of application for treatment The corrections were all made with the eyes under the full influence of a cycloplegic, the design being to ascertain as accurately as possible the static refraction of each eye in every case To this end the ultimate test was the subjective examination, but this was, almost without exception, aided by the employment of the ophthalmometer of Javal and Schiotz, and the shadow test, one or both In the private records, in a large number of cases both were used, while in the hospital cases the shadow test was employed in almost every case The two records are kept separate in the tables to show the importance of great care in determining the refraction of the eyes In the haste which it is necessary to observe in the crowded clinic room where a limited time only can be devoted to the correction of a large number of patients, it is not possible to give the painstaking care that is given during the longer time devoted to work in the private office The result of this greater care, to absolutely reduce every eye to the optical basis of emmetropia, is shown by the different results reached Then in the public service it was not always deemed necessary to correct the eyes of those employed in coarse labor, with the same accuracy as would be observed in the case of those engaged in finer pursuits

The analysis discloses the percentage of simple myopia and hypermetropia, of monocular and binocular astigmatism In the latter group the symmetrical and asymmetrical direction of the meridians of shortest radius were carefully noted The result is disclosed in the condensed tables, which have been prepared with great care by Dr Thorington

All cases are grouped as symmetrical, where the combined value of the inclination of the meridians was 180° of linear development on an arc, counting from 0° on a horizontal line Thus, if the meridian of shortest radius was at 90° in both eyes, or at 60° on one side and 120° on the other, or at 75° and 105° respectively, they were recorded as symmetrical, since the sum of their values is in each case 180°, and so for any other inclination, e g , 0° and 180° or 15° and 165°, and so on These symmetrical inclinations are divided into those according to rule (homologous astigmatism), i e , where the shortest radius was at 90° or approximately so, and those against the rule (heterologous), that is to say where the shortest radius was found at 0° or approximated the horizontal nearer than the vertical direction The asymmetrical cases were also grouped according as the direction of the meridians approximated the vertical or horizontal direction All cases where the combined values in degrees were greater or less than 180° are placed in the asymmetrical groups unless the meridians were at right angles They were then placed in the group of heteronymous astigmatism In the rare instances where the meridians were inclined from the vertical or horizontal, but were parallel to each other, they have been placed under the head of homonymous astigmatism For example, if the axis of the correcting cylinder were required at 90° on one side and 75° or 60° on the other, it will be found under the head of asymmetrical astigmatism according to rule If the axis was placed at 0° and 150°, respectively, it was placed under asymmetrical astigmatism against the rule If at 0° and 90° respectively, the case fell under the category of heteronymous, whereas if both axes were required, for example, at 60° or at 120°, it was recorded as homonymous astigmatism

SUMMARY OF REFRACTION ERRORS AND DIRECTION OF MERIDIANS OF SHORTEST RADIUS IN 2 500 PAIRS OF EYES—1,800 IN PRIVATE—1,200 IN HOSPITAL RECORDS

	Private		Hospital	
Simple myopia	7	5%	25	2 0%
Simple hypermetropia	72	6 0	253	21 0
Monocular astigmatism	70	5 0	94	7 8
Binocular astigmatism	1,151	88 5	828	69 0
Total cases	1,300		1 200	
	Private		**Hospital**	
Binocular symmetrical astigmatism	694	60 2%	618	74 4%
Binocular asymmetrical astigmatism	310	26 8	158	19 8
Heteronymous astigmatism	123	10 6	40	5 2
Homonymous astigmatism	24	2 1	17	1 2
Total binocular astigmatism	1,151		828	
Symmetrical astigmatism				
(*a*) According to rule (homologous)	543	78 2%	559	97 7%
(*b*) Against rule (heterologous)	151	21 8	54	2 8
Total symmetrical astigmatism	694		618	
Asymmetrical astigmatism			158	
(*a*) According to rule	223	71 8%	126	79 1%
(*b*) Against rule	87	28 2	32	20 9
Total asymmetrical astigmatism	310			

DIRECTION OF MERIDIAN OF SHORTEST RADIUS IN ALL CASES OF SYMMETRICAL ASTIGMATISM

Meridian at 90°	57 0+%
Meridian inclined 15° or less on each side	19 7+
Meridian inclined from 15° to 30° " "	4 0—
Meridian inclined from 30° to 45° " "	1 0
Meridian at 180° or 0° " "	12 0
Meridian inclined 15° or less " "	4 0—
Meridian inclined from 15° to 30° " "	2 0
Meridian inclined from 30° to 45° " "	5

1772 Walnut Street

LATENT ASTIGMATISM

Read in the Section on Ophthalmology at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY HORACE M STARKEY, M D

CHICAGO

For a number of years the conviction has been deepening in the mind of the writer that latent astigmatism plays a much more important role in the production of asthenopia than is usually supposed, if one may judge from the attention given to this subject in text-books and monographs This conviction has been more decided, since it has become more common to give patients lenses correcting the apparent error, to be worn continuously for one or more days, after which another test of the refraction is made

Some of the members of this Section may remember that the writer one year ago mentioned with praise the practice, common with some ophthalmologists, of giving lenses, not only spheres but cylinders, to patients to be worn a few days for trial before writing the prescription for permanent glasses Again, your attention is called to this procedure with the certainty that no one of you who may employ it will willingly discontinue a plan so satisfactory both to physician and patient For convenience, the oculist must provide himself with a number of pairs of light spectacle frames, of various dimensions and differing in no way from ordinary spectacle frames except that the cells must be round instead of oblong, so that cylinders and prisms may be rotated in any direction With a supply of lenses ground to fit these frames the oculist can, in a moment, adjust almost any combination It is all very well to say that a cycloplegic must be used in every case and that full correction of the error thus found must be prescribed But often this is absolutely impracticable Many patients will not submit, but will go to the optician and take whatever he may offer, rather than subject themselves to the action of even the most evanescent of the cycloplegics Many of the busy men and women in banks, stores and schools who most need skilled services, are willing to take half an hour or an hour a day for a week or two if necessary, but absolutely refuse to give up the whole of one or more days While not ideal this method has much to commend it and leads to correct results Not the least point in its favor is the fact that it keeps the patient comfortable from the first, which with the nervous, the irritable and the skeptical is no small matter Since proceeding in this way with many cases, the frequency with which latent astigmatism is a very important factor in the causation of asthenopia has been forced upon the writer's attention as never before And this because it presents a much more vivid object lesson, when one works out the refraction as carefully as possible with the ophthalmoscope, the retinoscope and the test lenses, gives a cylinder which seems to correct the error and finds, when the patient returns in one or two days, the former amount of manifest astigmatism doubled and after a further time, that a still higher degree of astigmatism has become manifest This method presents a much more vivid object lesson than the correction of the same error under a cycloplegic These object lessons became so frequent that they could not be ignored and led to a reexamination of the text-books on ophthalmology to learn the teaching of the authorities on this point This teaching, as shown by twelve recent works, may be briefly summarized as follows in the following, De Schweinitz 1892, Juler 1893, Norris and Oliver 1893, and Kies 1895 nothing on this topic could be found

Nettleship, "Diseases of the Eye," 4th American Edition, 1890, page 354, has the following "There seems no doubt that in young persons with vigorous accommodation, the astigmatism of the cornea is often partly corrected by the ciliary muscle acting unequally on the different meridians of the lens and that the seemingly greater frequency of astigmatism in the presbyopic is due to the impairment of this power

Schmidt Rimpler (Roosa) 1889, "Ophthalmology and Ophthalmoscopy," pp 82, 83 says "Differences in the meridional curvature of the lens occur occasionally from partial contraction of the ciliary muscle and, if situated in the opposite direction, serve to diminish the corneal astigmatism" "In rare cases, astigmatism depends solely on anomalies in the curvature of the lens and disappears after the use of atropin" And again, page 88 "In all these tests the results are often disturbed and confused by partial contraction of the ciliary muscle, which as we have mentioned may cause diminution, and even abolition of the astigmatic error of refraction The use of atropin relieves this difficulty, but it is to be noted that the correcting lenses which are then found, are often discarded by the patient on the restoration of accommodation"

From 'Errors of Refraction,' Valk, 1890, page 158 'Let me caution you at this point that you may meet cases of astigmatism that will be concealed or caused by irregular contraction of the ciliary muscle thus changing the refraction of the lens in different meridians This condition you will discover by the action of atropin, and by the ophthalmoscope" He also gives several examples among the "illustrative cases,' where astigmatism was made evident or increased by use of atropin

Fuchs 'Text book of Ophthalmology' 1892, p 655 'Another cause of asthenopia lies in the endeavor of the astigmatic patient to correct his astigmatism by means of his accommodation For this to be effected it is necessary that the act of accommodation shall take place with a varying degree of force in the separate meridians of the lens That this can be done is proved by the fact that after atropinization the astigmatism is not infrequently found to be considerably higher than before'

Berry 'Diseases of the Eye, 1893, page 556, teaches that corneal astigmatism according to rule is lessened by lenticular astigmatism while that contrary to rule is increased by the action of the lens

Anomalies of Refraction and of the Muscles of the Eye," Tiffany, 1894, p 208 "Astigmatism is frequently concealed by the power of accommodation, especially in the low degrees In these individual cases as before said, complete mydriasis is imperative that the true conditions may be revealed"

Noyes, "Diseases of the Eye," 1894, p 111 "Astigmatism of the lens may increase or diminish that of the cornea Javal has shown that a small fraction of the total astigmatism is due to the lens, he has also shown that by accommodation the lens may partly or wholly neutralize asymmetry of the cornea He, and before him, Dobrowlsky, attributes this to unequal contraction of the ciliary muscle" "Latent and manifest astigmatism refer to the influence of the accommodation in concealing or modifying the error"

Roosa has considerable to say about the position and shape of the lens as permanently modifying corneal astigmatism, but says little about astigmatism becoming latent Roosa, "Treatise on Diseases of the Eye," 1895, p 497 "The subtraction of half a dioptre," (from the corneal astigmatism as shown by the ophthalmometer) "for the neutralizing action of the lens will generally give, in astigmatism with the rule, the degree that remains for correction, and as Donders stated in 1864, in the English language, the total astigmatism of the dioptric system of the eye "In corneal astigmatism against the rule, the action of the lens does not, (whatever it may be) practically relieve the astigmatism It must then be fully or over-corrected in order to relieve the symptoms"

We find that of these well-known authors, four do not mention the subject, two speak of the lenticular astigmatism as modifying that of the cornea, but do not mention the correcting action of the ciliary muscle, and six show such action as an important and always to be remembered factor In so far as any mention is made of the point, it is taught that the action of the lens only corrects corneal astigmatism when the latter is according to rule The writer's cases, however, show that a portion of the astigmatism may be latent, whether the meridian of greatest curvature is vertical, horizontal or diagonal To illustrate how latent astigmatism may be rendered manifest by the use of cylinders, ten cases seen in private practice during the last four months of 1894 are taken Each of these showed an increase of from 0 25 to 1 D in the manifest astigmatism They were all relieved of severe asthenopia by the use of cylinders and have had no return of the asthenopia in the intervening time, four to eight months (About the same number of similar cases have been seen since Jan 1, 1895) For lack of time but four cases are given in detail

Case 1—Mrs H, stenographer, age 28 Had been unable to work for several months on account of headache from which she has always been a sufferer Apparent astigmatism of 0 37 D according to rule increased by use of glasses two days to 0 62 D, which gave complete relief so that work was resumed Relief has continued to the present time without further increase of astigmatism

Case 2—Mr M, medical student, age 22 Apparent astigmatism of + 0 37 D at 105° and 100° increased to + 0 88 D at same angles

Case 3—Frances I age 13 Apparent astigmatism of + 0 37 D × 90 each eye increased to + 1 D and + 0 88 D × 90

Case 4—Mrs Dr W, age 41 First seen Sept 6 1894 Eyes tire quickly and she has much headache, particularly after going to theater or other places where faces are watched Examination shows astigmatism, which appears to be corrected by + 0 37 D C × 90 each eye, which glasses seeming very restful, are given for use for twenty-four hours September 7 Requires + 0 75 D C × 90 each eye, which were given September 8 Requires + 1 D C × 90 each eye Prescribed + 1 D C × = 90 for each eye These glasses have been worn continuously since with great satisfaction and comfort, though the left eye would now take + 1 25 D C

Case 5—Mrs J F D, age 31 Apparent astigmatism of + 0 62 D and + 0 37 D × 180 increased to + 1 25 D and + 2 D × 180 Subsequent use of cycloplegic showed this to be the total amount of astigmatism

Case 6—Miss C E W, trained nurse, age 29 Has had very severe and almost constant headaches for many years October 2, apparent astigmatism + 0 62 and + 0 50 D × 90, for which lenses were given October 4 accepts + 0 88 and + 0 75 D C × 90 October 5 No headache, though eyes were used much by artificial light at fancy work, etc to try them Likes + 0 88 for each eye, which was given with complete relief

Case 7—Mr J B C, age 24, copyist. Apparent astigmatism of + 0 37 D and 0 25 D contrary to rule increased to + 0 62 and + 0 50 D at same angle

Case 8—Mr R A S, medical student, age 32 Dec 13, 1894 Has worn + 0 50 D C contrary to rule for each eye for about five years Have not seemed right of late Requires now + 1 D C × 15 and + 0 62 D C × 180 These are given December 17 Has used above with much more comfort than former glasses Now requires + 1 25 D C × 15° and + 0 88 × 180, which are tried December 21, likes above very much, so prescribed + 1 25 D C × 15° and + 0 88 × 180, which give entire satisfaction

Case 9—Miss O B , age 31 Dec 12 1894 Apparent astigmatism of right eye corrected by + 0 75 D C > 60 , left eye hyperopic 1 25 D These lenses worn till December 31, when R E requires + 1 50 D C ∖ 60 which is given Jan 3, 1895, R E requires + 1 75 D C ∖ 60 Further astigmatism not developing, + 1 75 D C ∖ 60 and + 1 25 D S were prescribed These have been used with comfort ever since and eyes are used more easily than for many years

Case 10—Mr G H C , age 24 Clerical work Has constant headache and eyes tire easily Appears to require — 0 25 D C / 90 but retinoscopy favors + 0 25 D C × 180 — 0 25 D C ∖ 90 for three days were not comfortable Used + 0 37 D C ∖ 180 three days without headaches and could use eyes much more easily Now finds + 0 50 D C × 180 good, and three days later + 0 62 D C × 180, which were finally given Eyes have since been used without headache or weariness

We see that of these ten cases, four had astigmatism according to rule and a fifth had the angles but 10° and 15° from the vertical , three had astigmatism contrary to rule and one varied but a few degrees from this , one had the very irregular angle of 60° Seven eyes show an increase of 0 25 D in the astigmatism , three show 0 37 D, two 0 50 D , five 0 62 D , one 0 75 D , and one 1 D increase in astigmatism

SUMMARY

1 Latent astigmatism is a frequent and important cause of asthenopia

2 The latent astigmatism may in many cases be made manifest without a cycloplegic and without interfering with the patient's business by giving lenses which correct the manifest error, which may be worn a day or two, when an additional amount of astigmatism will be manifest which may be corrected in the same way, and so on till all the latent trouble is unmasked

3 This may be done without discomfort to the patient, and is therefore advantageous with the skep tical, irritable and nervous

4 Recent text-books do not give this subject the attention its importance deserves

5 Astigmatism may be latent whether the axis of greatest curvature is vertical, horizontal or diagonal

3300 Indiana Avenue

ANOMALIES IN OPHTHALMIC PRACTICE

Read in the Section on Ophthalmology, at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY A C CORR, M D
CARLINVILLE ILL.

In presenting this paper I am not proposing to present anything new, but merely to bring in a few topics that, to say the least, are out of the ordinary way in ophthalmic practice, and therefore are entitled to be designated as anomalies

Case 1—*Congenital Interstitial Opaque Infiltration of the Cornea, not Syphilitic nor Cicatricial* Dec 1, 1893, was presented for treatment Anne H a two months old, healthy, well developed child No appearance of disease, past or present, except that both cornea were nearly entirely opaque At once I asked the mother when the baby had sore eyes to which she replied 'Its eyes have not been sore " ' When did you notice this condition of its eyes?" She replied ' When it was ten days old " Has there been any yellow or gummy discharge from the child's eyes?" She replied ' There has not " Had you any leucorrhea or whites before or about the time the child was born?" To which she replied, she had not Do you know what I mean by this discharge of 'whites' or leucorrhea?" She said ' Yes for I had it when my second child was born and it made her eyes sore They were very sore at once and for a long time and it made her eyes white, too, as you can see "

On closer examination of the child's eyes the cornea proved to be smooth and regular in contour lids normal eyes well formed, epithelium of cornea well formed and clear and smooth Irides, hazel brown Immediately below the corneal epithelium there was almost a uniform white opacity R E , the opacity was so thick and uniform that the *pupil could not be seen*, and the *iris but dimly*, to lower and inner part The opacity was thickest in upper and outer part L E , the pupil was visible only from lower and inner side under the opacity that extended from above and outward, where it was entirely opaque This condition was in marked contrast to the eyes of the next older child Minnie, aged 6 years, who had evidently had ophthalmia neonatorum The cornea of her eyes was small and distorted, the surface irregular and not smooth, nor the epithelium well formed The opacity was apparently in the epithelium and subjacent layers The lids showed also signs of the past disease The epithelium of the palpebral conjunctiva was degenerated, thick and cicatricial This child, too, was well grown and healthy

The eldest child, Teana, aged 9 years, was a well formed, well developed child Bright and intelligent, eyes without blemish The teeth and jaws of the two older ones were well formed and normal No history of skin disease was elicited

The father, Fritz H aged 30 years of German parentage, about five feet, five , health good Had never exposed himself out of wedlock so as to acquire syphilis Physical examination revealed no signs of it

Mother, Annie L H , aged 30, medium size, well formed, health good, German parentage Pregnant three times only, and three children as above Never had falling of hair, skin disease, nor cutaneous discolorations Says her husband does not drink, and is attentive to his family They are a neat, clean and tidy family , farmers, living in small town

Dr C W Johnson, of Litchfield, Ill , a well-informed physician, graduate of Jefferson Medical College, in active general practice, saw the patient and after hearing the history said, that it was a great curiosity The merest tentative treatment was prescribed aqua pura, ℥i , acid carbolic, gts i , acid boracic, gr xv Mix with collyria

Sig , put a few drops in each eye three times daily

In the meantime, I addressed a letter to Dr M Thomas, B S , the family physician, a physician personally known to me, of good reputation, in active general practice for ten or more years, who wrote under date of Dec 12, 1893 'I have investigated the matter The child has not had inflamed or sore eyes since its birth I am satisfied it was born as you see it Nor have the parents had syphilis I know them well "

December 15 Mother thinks the eyes are improved, child is developing well in every way, other than condition of eyes Slight lateral nystagmus Treatment same

Jan 19, 1895 Condition of eyes perceptibly improved Pupil can be seen through apex of cornea in L E and through lower and inner part of cornea of R E child enjoys looking at light of lamp or window Nystagmus present Child developing nicely Thickest part of nebula above and to outer side both eyes Ordered collyria continued and a little Pagenstecher oint well but lightly rubbed on outside of lids daily

March 2, 1894 Child doing nicely Developing well , corneal opacity clearing up more perceptibly in both eyes Nystagmus Continued medicine as before

April 13, 1894 Improvement marked, yet not so rapid apparently Treatment same

May 25, 1894 Much improved L E cornea clear except a small area Child developing well Follows objects with eyes and uses its hands with fair accuracy to grasp at objects apparently seen Oint and collyria as before continued

July 20 1894 Corneal opacity improving Pupil of R E clearly seen through apex of cornea Nystagmus less

Sept 7 1894 Corneal condition improving Slight signs of internal strabismus of R E , continued treatment

Dec 14 1894 Now one year and fourteen days under observation, and child one year and two months old Condition of eyes much improved L E , nearly entirely clear R E slight haze below apex of cornea and almost imperceptible over apex of cornea Slightly more decided opacity above as if sclera was slightly advanced on to contour of cornea Nystagmus still perceptible R E strabismic Divergent power normal when L E is covered Has four incisor teeth above and below and two bicuspids just emerg ing in upper jaw Teeth not deformed blackened nor decayed Health good Eats some at table and amuses itself with toys

April 28, 1895 The child has grown and is well developed, walks and amuses itself with playthings, and its vision is apparently good Has many teeth—none decayed, on focal illumination of the left cornea, there is slight nebula of former opacity seen In R, corneal opacity is seen plainly without illumination The apex of the cornea is nearly perfectly clear but there is a ring around the apex of the cornea about 3 mm in diameter that is somewhat more marked, and at upper part of cornea the opacity appears as if the sclera was extended about 1 mm on to the cornea Nystagmus less Squint mostly in R E, but alternating

Case 2—Keratitis Materni Twice Recurring Nov 12, 1892, Mrs E A S presented herself for treatment of her sore eyes, 24 years old married Two children, youngest seven months and nursing Eyes have been sore two months Patient, medium sized, not well nourished, pale and anemic, dark hair and fair complexioned hazel brown eyes Conjunctiva of both eyes hyperemic On right eye the cornea was involved with what seemed to be an unusual variety of keratitis It consisted in a band of brownish red, almost the entire circumference of cornea on inner and lower portion about 1 mm wide loss of epithelium and linear extension of capillary blood vessels from conjunctiva on to the cornea to the extent of the width of the band The cornea was not otherwise hazy, aqueous clear Pupil not sluggish, nor other evidence that iris was involved Photophobia marked in R E and pain and tenderness complained of, mostly in R E The eye was cocainized and the band examined with probe It bled freely on being slightly touched The eyes were washed out freely with boric acid solution Pupil of R E dilated with atropin, yellow oxid oint with atropin applied nightly in the usual way and both eyes washed out with boric acid solution two and three times daily

Nov 2[illegible] 1892 No improvement The band had extended entirely around the cornea and was widened Pupil well dilated and other indications of the medicine having been properly used Conjunctiva of L E much more hyperemic Photophobia increased Being somewhat astonished at the condition, I inquired more closely into the constitutional condition of the patient I found no clue to a specific disorder, but not knowing what else to do I suspended the oint and prescribed pot sol iod, hydrarg chlor corros Take a teaspoonful four times daily

Dec 10, 1892 Condition much the same, certainly not improved Whereas she had before been screening eyes with London smoked coquelles I ordered R E kept bandaged, and in addition to the above, ordered quinia grs xxx, taken in next twenty four hours and quinia grs iij taken every morning at 9 o'clock

Jan 20, 1893 No improvement The band had widened in R E to near 2 mm and same condition had involved nearly the circumference of L E The non-involved surface of both cornea clear, and none of the white infiltration of cornea that usually accompanies keratitis The margins of the band on the cornea were markedly even on both eyes As my astonishment had in nowise abated I ordered the potassio mercuric solution alternated every four hours with dessertspoonfuls of elixir of pyrophosphate of iron and calisaya bark, stopped the quinia and bandage left off, coquelles as before

Jan 28 1893 Much improved, spirits much more hopeful Keratitis much abated Hyperemia of conjunctiva less Photophobia less, appetite good, sleep good Ordered the potassio mercuric solution discontinued and elixir of prophosphate of iron and calisaya bark in dessertspoonfuls regularly every four hours Measured refraction, and ordered full correction of ½ D hyperopia, worn all the time

Feb 27, 1893 Patient about well, only slight traces of trouble left, photophobia gone, doing all her work for family and has continued to nurse child all the time Ordered dose of elixir three times daily and collyria discontinued

March 15, 1893 Patient apparently quite well Almost no signs of past keratitic trouble Ordered elixir taken twice daily, as long as nursing continued April and May saw the patient She remained well

Sept 5, 1894 Patient again presented herself for treatment of eyes Nursing third child, which was born in May, 1894 Eyes became sore in August, two months earlier than before Condition of eyes exactly as before in the beginning Brownish vascular band partly surrounding the R cornea, both conjunctivæ hyperemic, with the addition of a slight redness and abrasion along the margins and tip of the tongue, with the characteristic scalded feeling of stomatitis materni This latter confirmed my notion that led to the prescribing of the elixir of pyrophosphate of iron and calisaya bark, that it was a keratitis caused by the conditions that gave rise to the nursing sore mouth that I had treated often in its purity while in general practice

That sterling remedy which has proved more nearly a specific in stomatitis materni under my observation than anything else, the elixir, as before, was at once ordered in dessert spoonfuls four times daily, with an occasional washout of the conjunctival cul de sacs with the boric acid collyria

October 15 The patient seemed about well The disease had not extended and began to abate within a week after the remedy was taken

November 10 Patient wrote she was well I ordered her to continue the elixir in doses as before, twice daily while nursing I am satisfied she is well of her eye trouble to date

Now you may ask why do I call it keratitis materni? Because it originated as a part of the assemblage of symptoms that characterize that maternal disease of stomatitis and *not* amenable to ordinary treatment of the local eye disease, but readily and perfectly amenable to the constitutional and general treatment useful in the disease known in general and obstetrical practice as stomatitis materni

Case 3—Piece of Orbital Bone Encapsuled in the Globe, two and a half years Choroid not Totally Disorganized July 15, 1892, Mr C R B, presented himself for consultation in reference to the future sight of his right eye which was injured on July 4, by a rocket that did not sky He said he was sitting some distance—forty yards—from the stand where the fire-works were being exhibited and that one rocket, after the fuse was lighted, fell so it flew off horizontally and struck him in the eye There was a deep lacerated wound of the skin just at lower margin of orbit, and tissues generally bruised and discolored The tension of the globe was minus Cornea normal and clear Anterior chamber well formed Pupil slightly dilated Lens normal with a pink reflex No reflex from fundus Eye sightless These facts together with the evident severity of the contusion led me to send the attending physician a note that the eye would be sightless and would better be removed

I saw no more of the case till I was called Jan 8, 1895, to remove the eye At this time there was a deeply sunken and adherent cicatrix at the middle and margin of the lower orbit, lower lid everted, and slight whitish secretion in lower conjunctival cul de-sac Globe shrunken about one-third and only slightly tender Tension minus But little of cornea visible, sclerotic nearly normal in appearance Patient said the globe had been tender by spells, and he had some discomfort about the orbit Bits of bone had been discharged through the skin wound and the nostril had discharged more or less secretion all the time The globe was removed in the ordinary way and without any incident worthy of note Immediately after its removal, I incised the globe and found inside a shrunken opaque lens and some fluid contents, rather clear than opaque, choroid only partially disintegrated and adherent to sclera in places At posterior and lower part near the disk, a hard lump of dense tissue was noted, which rattled under the knife when cut and, by close work, I dissected out the bone you see in the hardened specimen It is about three eighths of an inch long, little more than one sixteenth of an inch in lateral dimensions, slightly irregular in shape and has a smooth notch near its middle as if a margin of a foramen—probably the infra orbital—and had been evidently encapsuled in the interior of the globe since the wound by the rocket, July 4, 1892, two and a half years ago

Case 4—Hemorrhage of the Iris, as a Result of Slight Iridectomy in Cataract Extraction July 29, 1894, Mrs M A T, a lady 65 years old, took her place on the chair for cataract extraction on R E She was prepared in the usual way The first incision was made wholly in the corneal tissue An iridectomy was decided upon because the pupil did not dilate round, but rather oval, vertically, and the cataract was of long standing The iridectomy forceps was introduced and the inner edge of the iris grasped, drawn out and snipped with the scissors so as to just allow of the passage of the lens Not more than one-half of the width of the iris was cut out The instant the iris was cut, the anterior and posterior chambers were filled with blood which could be plainly seen, issuing from the edge of the iris Soon everything in both chambers of the eye was obscured by the blood, and no further progress could be made till the blood was washed out The corneal flap was made to gap, and a moderate jet of mildly borated water was made to enter the chambers from a dental bulb syringe until all blood stains were out of the way, when the operation was terminated and the chambers again cleansed by detergent force of the jet as before No untoward effect followed the hemorrhage, except that there was more of the inflammatory exudate in the gap in the iris This, however, was all absorbed, and after a secondary operation, a month later, the vision was fairly satisfactory Of course such hemorrhage was unexpected, unprepared for, embarrassing and somewhat astonishing The only thing unusual in the appearance of the eye was that one of the superficial conjunctival vessels dipped into the sclera within 2 mm of the sclero-corneal junction just opposite to where the iridectomy was made I do not remember having seen an account of but one such case in the ophthalmic literature that has come under my observation

Case 5—Calcareous Lens, Occluding the Pupil, Becoming Detached, Dislocated and Floating—Iritis—Requiring Removal Nov 21, 1894 T R H , a gentleman about 25 years of age, a mechanic, presented himself for consultation and treatment of right eye He said the white in his eye had gone, and was moving around I recognized the gentleman as one I had observed some time before having the pupil of the right eye occluded as a result of plastic iritis caused by being struck in the eye with a ball when about 16 years old, since which time he had had the ordinary white and undilatable pupil which characterizes an occluded pupil The iris was somewhat discolored as compared with its fellow At this time the 'white" in his eye was gone and was moving around The tension of the globe was minus, but not markedly so, within the past few days the patient had sustained some slight stroke on the eye, so slight as not to attract attention only that he accidentally learned that the "white" in the pupil had been dislocated On close examination of the eye, now, I found a white floating body about three-sixteenths of an inch in dimensions behind the iris, that was sometimes in the anterior and sometimes in the posterior chamber At this date the eye did not show signs of irritation

November 28 Patient presented himself with marked circumcorneal hyperemia and the eye tender I advised no longer hesitation about its removal, to which patient readily acceded, but at this time I could not get the lens dislocated into the anterior chamber So I at once produced homatropin mydriasis and had the patient lean far over with face on hands till the lens came forward into the anterior chamber when eserin was instilled, until the mydriasis was overcome and sufficient myosis was produced to retain it there and the operation was proceeded with But, alas! not with the perfection I had anticipated After the corneal incision the lens would not deliver easily It seemed to hang to the iris I introduced the ordinary iris forceps and grasped the lens a little too far back, being deluded by the media I was looking through, and the unexpected hardness of the body, and it slipped and went over into the posterior chamber So an iridectomy was made and the operation completed in the ordinary way

The result brought a good appearing eye and looks better than it did before when the pupil was occluded with a white spot The eye has no perception of light, and no reflex obtainable from the fundus

I meant to exhibit to you the pure specimen, but am obliged to present it crushed by the postoffice stamp The crushed condition may be better for examination

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NOTES ON TWO CASES OF LARYNGEAL NEUROSES

Read in the Section on Laryngology and Otology at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY S K. MERRICK, M D
PROFESSOR OF DISEASES OF THE NOSE THROAT AND CHEST BALTIMORE MEDICAL COLLEGE BALTIMORE MD

Case 1—Mrs O H , widow tall and rather slender age about 63 to 65, native of Baltimore was referred to me by Dr Samuel T Earle of this city is a woman of culture and refinement and has lived in affluence and ease most of her life, but had met with some reverses of fortune some years before, and her physician told me that for years past she had been in poor health and was somewhat of a neurasthenic, but was never hysterical

About three weeks before she came under my care she was seized with an acute laryngitis with aphonia Dr Earle applied the usual remedies, but finding the patient got no better, sent the case to me On examination, the pharynx was highly congested, reddened and hyperesthetic It was with great difficulty after several visits that I got a view of the larynx partly owing to the overhanging epiglottis, but principally on account of the morbid irritability of the pharynx Cocain in this case seemed to have little effect A good view, however, of the larynx about the fourth visit was secured and laryngitis was seen to be present, yet not reddening the cords throughout their entire extent but an image was revealed, showing that I had to deal with a paralysis of the arytenoideus muscle The cords from the thyroid angle to the vocal processes were properly approximated on attempts at phonation, but the characteristic triangular space between this point and the posterior commissure left no room for doubt as to the diagnosis The phonative waste which Von Ziemssem first appropriately called this loss of air in this form of laryngeal paralysis on phonation, was well marked

The treatment at first was directed to the cure of the laryngeal inflammation by means of the usual local sprays, and later, strychnia in increasing doses and electricity were used—the faradic current locally and occasionally generally—for the cure of the neurosis, or stimulation of the recurrent nerve

From February 6 to April 20, the patient came to see me on alternate days, generally, and by this latter date the normal color of the pharynx and larynx had apparently returned and yet the characteristic triangular space, the aphonia and phonative waste were all unchanged I decided now to send the patient to the seaside, she accordingly went to Atlantic City, and remained there several weeks, when she returned and again reported at my office—' no better" The laryngeal image was in *statu quo*

As the inflammation, as far as I could determine was gone from the larynx and not the least improvement in phonation had taken place I was inclined to give an unfavorable prognosis In the meantime local treatment, strychnia and electricity were resumed, and on June 14, six months after the beginning of her aphonia, I sent her to the country for the summer with no better voice than when she came under my care I told her family I feared she would never fully regain the use of her voice In this I was mistaken, about the middle of August she suddenly regained it and it has remained unimpaired up to this time

Was this a case of paresis from acute laryngitis, penetrating into the deeper structures causing pressure on a branch of the recurrent laryngeal (the most usually assigned cause of this neurosis) or was there an hysterical element present also? That the acute cold was the exciting cause there is no doubt whatever, and it is not impossible that continual pressure on the nerve-twig supplying innervation to the arytenoideus, had left the nervous energy so weakened, even after the entire disappearance of the inflammatory thickening, that a prolonged stay in the country was necessary to build up the tone of the entire nervous system before the twig could be excited into activity

Sajous says this form of paralysis occasionally results from hysteria Ingals says it most frequently results from acute or subacute laryngitis

Lennox Browne says this form of paralysis may be seen in acute catarrh and it is a question whether this and some of the temporary paralyses may not be due to inflammation of the small glands which are situated around the terminal branches of the recurrent nerve

Bosworth cites three cases reported by Proust—one due to incipient phthisis, one to hysteria one to catarrhal laryngitis and one by Johnson due to diphtheria He further says that hysteria was the assigned cause in cases reported by Mackenzie Luega, and Duncan and Von Ziemssen has observed a case which followed directly upon cold

This last case is *one* of only *two* mentioned in his (Bosworth s) work as having acute laryngitis as the cause In looking over six authors I found this to be the most commonly assigned cause But I did not find any reference made to the possibility of this dual causation both factors acting at the same time

My case was clearly due to acute laryngitis, but its failure to get well after all laryngoscopic traces of laryngitis had disappeared, and the sudden restoration of the voice months afterward, points to an hysterical etiologic element which greatly delayed recovery Knowing that acute laryngitis ushered in the aphonia my efforts were at first all directed to the cure of the former affection, which yielded completely so far as laryngoscopic appearances could establish this fact, yet failing signally to relieve the aphonia after the very apparent cause had been removed and strychnia and electricity doing no good, I gave an unfavorable prognosis, which naturally distressed the patient and her family not a little Had I suspected that hysteria was a latent etiologic factor, it is very probable I could have restored her voice at any time after the laryngitis disappeared

[illegible] —Mrs D married age about 50, mother of four children consulted me Jan [illegible] I learned that in the previous November she had suddenly lost her voice without any premonitions except the 'rising in her throat of a lump or ball the size of a large marble From this time on, she had been unable to speak except in the whispered voice

The laryngoscope revealed the characteristic laryngeal image of unilateral adductor or recurrent paralysis of the right side On attempted phonation the left cord went beyond the median line and near its fellow but not sufficiently close to produce more than the whispered sound on attempted phonation

The patient was very despondent and often shed tears over what she considered her hopeless condition, and all assurances on my part that she would regain her voice were met by a shake of the head and tears I felt sure of her ultimate recovery and assured both her and her husband, who is a prominent clergyman of this city, that I had no doubt of restoring her voice The husband was easily convinced, but all my assurances failed to produce any impression upon her and in consequence all my remedies—applications sprays, electricity, etc, utterly failed to give relief for you must all agree with me that the case was one of hysterical aphonia

This being the first case of unilateral paralysis, of clearly hysterical origin, that I had ever seen, I was anxious to verify the diagnosis, by curing the case so promptly that no doubt would be left as to its etiology In this I was disappointed as I have before indicated She remained under my care until warm weather, when she was sent to the mountains and after a month or more her voice returned as suddenly as it had disappeared, thus confirming my diagnosis

When she returned to the city in the fall, she came to see me, and a surprise awaited me when I made a laryngoscopic examination I found the right chord still in the cadaveric position and the oblique glottic space and over-riding left arytenoid on phonation (the same image) that of right adductor or recurrent paralysis—only the left chord now came close enough to its fellow for the purposes of phonation She now made known important information, which she had withheld from me, fearing it would influence me, and cause me to give an unfavorable opinion at her first t She told me that seven years before, she had consulted an eminent specialist of this city, who had diagnosised paralysis of the chord and told her she would never get well This had preyed on her mind and she confessed it was the chief cause of her incredulity to all my promises of cure During the seven years and up to November, 1892, (when her voice suddenly left her entirely) she had simply impairment of the voice, but could always use it in ordinary conversation—it had neither gotten better nor worse

The case was now clear—I had to do with a case of hysterical paralysis, engrafted upon a long-standing case of unilateral adductor paralysis As soon as the hysterical element had spent its force, a restoration to the condition induced by unilateral adductor paralysis was effected I had a view of her larynx recently and the laryngeal image is still unchanged Her voice is fairly good for conversational purposes, but when she talks much she feels a tired sense in the muscles of the left side, due to strain on the adductors in carrying the left chord beyond the median line

It may be interesting to cite the opinion of several prominent authors as to the etiology of unilateral adductor paralysis before closing the notes on the case

Sajous, p 366, says "That adductor paralysis, bilateral or unilateral, can be due to pressure on the recurrent laryngeal nerve, without involving the other muscles of the larynx supplied by that nerve, seems to be very doubtful" While Ingals, p 503, says "Unilateral adductor paralysis is caused in most cases by pressure upon the recurrent laryngeal nerve, by aneurysm, tumor of the neck, cancer of the esophagus, etc, and not infrequently by hysteria"

Bosworth, p 665, says "I have never seen a case in which I felt warrranted in making a diagnosis of this form of paralysis" He thinks it extremely difficult to differentiate the affection from unilateral recurrent paralysis

Lennox Browne, quoting Mackenzie, says of unilateral adductor paralysis "This rare condition may be due to chronic toxemia, lead, arsenic, diphtheria, etc, may result from cerebral disease or may be caused by cold, or muscular strain, and is met with after smallpox, in constitutional syphilis and in phthisis'

McBride's edition of 1892, says "Pareses confined to the muscles which close the glottis are usually, if not always, due to functional changes in the nervous system, of which we may consider hysteria as the type' In support of this opinion he cites Semon and Horsley s experiments, where unilateral irritation of the corticular area in the brain, of adductor movements, produced bilateral adduction, but unilateral extirpation of the area produced no effect "Having had access," he says, "through the kindness of Dr Semon, to the manuscript of the work (then in preparation) I feel inclined to doubt whether any incontestable evidence can be brought forward as to the existence of laryngeal paralysis, due to organic changes affecting the adductors alone" He further says "From the experiments of Semon and Horsley, it is extremely doubtful whether there is any organic lesion which can produce unilateral paralysis of adduction"

It seems to me that my case, if it proves anything, proves that there was an organic lesion acting for seven years, when a functional disturbance was engrafted and that the cure of the latter had no appreciable effect upon the former This tells against

Semon and Horsley's experiments, as interpreted by McBride, and rather supports the older etiology

A singular and interesting fact in connection with the recovery of the voice in this case, I learned recently, and I mention it because I have never seen *any reference to the like in literature*

When she regained her voice it surprised her as much as it did her auditors As she expected to speak in a whisper as had been her wont for eight months, she was greatly frightened at the sound of her own voice, sent for her husband and in the midst of tears told him that she knew she was going to die—that this was a token Her husband laughed her fears away, telling her the doctor had told her she would again be able to talk Now comes the interesting phenomenon after having conversed in a whisper for eight months, on recovery of her voice, it was *impossible* for her to whisper She tried repeatedly, but each effort to whisper resulted in distinct phonation and clearly articulate speech

The conclusions which, I think, clearly follow from the notes on the above cases are

1 That we may have a paralysis of the arytenoideus muscle, due to the most usual cause, viz , acute cold, recover suddenly—just as hysterical cases recover—hysteria being a probable factor delaying recovery

2 That we may have hysterical aphonia supervene upon an old case of unilateral adductor paralysis, where only weakness of the voice was present, leaving the voice only slightly impaired from the old lesion, the latter being still in force and unaltered as shown by the laryngeal image

3 That authors differ widely as to the etiology and even existence of unilateral adductor paralysis, and that this field is a legitimate one for investigation, if for no other reason for the sake of rational and in consequence more successful therapeusis

4 That as long as diametrically opposite views are held by such authors as I have quoted, concerning its etiology, students will be confused rather than taught by the multitude of contradictory statements

5 That the greatest care should be taken before making a positive diagnosis in all cases of neuroses of the larynx, as the chances of error are numerous, and downright mistakes harmful in many ways

843 North Eutaw Street

HISTORY OF A CASE OF RECURRENT NASAL FIBROMA

Read in the Section on Laryngology and Otology at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY PRICE BROWN, M D
TORONTO

I must request your forbearance with me, for taking up your valuable time with the report of a single case We all know how little weight can be attached to individual histories, and that it is only by accumulated evidence that we can be guided to a proper estimate of the value of clinical research If this is true in reference to surgical practice, it is equally true of a wide range of subjects pertaining to our own special field Still, there are lesions in which the individual histories are so few and the few so widely spread over time as well as territory that it would seem to behoove every observer to chronicle each instance as it occurs with the hope of adding a fraction, however minute, to the information already possessed This I am inclined to think is true of nasal fibroma, and as the case I have to report presents several interesting features I trust you will bear with me while I briefly detail its history

On Nov 30, 1894, Mr A V P , aged 22 years, stenographer, consulted me about a growth located in the posterior half of the right nasal passage He was a hemophilia , had had no specific disease Family history good Parents both living and healthy No relatives, so far as he could remember, had been afflicted with malignancy or tuberculosis Five years ago he discovered a somewhat hard dark colored growth in the right nasal passage just within the choana His voice at the time was nasal and it was almost impossible to breathe through the right naris He consulted a specialist, who snared off a piece This produced profuse hemorrhage, which, however, soon ceased At different sittings during the next few weeks the snaring operation was repeated six or seven times, each time the bleeding was severe

As the tumor seemed to grow almost as rapidly as it was snared away, a microscopic examination was made and the disease was pronounced to be sarcoma On further consultation with general surgeons, it was advised that a portion of the right maxilla be removed and a silver plate inserted the case being considered one of malignant disease This, however, his people declined to consent to and he was sent to Boston and placed under the care of Drs Packard and McDonald, of the Homeopathic Hospital He remained there two months and during that time had several operations performed under ether The nature of these he could not tell, except that they were intra-nasal, attended by exhausting hemorrhages, and that the nostril after each operation was tightly plugged At the expiration of the period mentioned he was well enough to return home The doctors told him that they had removed the whole of the tumor, with the exception of a little piece at the back end of the passage, upon which they did not think it advisable to operate at the time During the following summer he had for months slight daily hemorrhages, but he spent the season in the country and they eventually ceased For the next three years he had so little nasal trouble that he did not think professional advice necessary About a year ago however, occlusion of the posterior end of the right nasal passage began to return , crusts would form which he found it difficult to void and slight hemorrhages would also sometimes occur In November the physician he consulted referred him to me

The entrance to the right nasal passage was somewhat narrow, but immediately behind it was a wide, open cavity for about one half the normal depth of the passage There seemed to be complete absence of the inferior turbinated bone , probably removed by surgical operation in Boston, as already related About an inch and a quarter from the anterior naris the passage was completely filled by a bright reddish growth springing from the septum, the vault above and the middle turbinated The attachment on the septal side extended down to the bottom of the inferior meatus The uvula was very long Posteriorly, the tumor filled the whole of the nasal cavity It extended behind the septum which it seemed to have pressed to the left On the right it was attached all the way down to the floor of the naris and lay immediately anterior to and continuous with the Eustachian tube This tube occupied a plane considerably posterior to the left Eustachian, no doubt owing to the pressure of the tumor

In other respects the health of the patient was of an ordinary character with the exception already mentioned, that he was a hemophilia He told me that the extraction of a tooth would be followed by bleeding for hours, as also would the slightest cut or scratch

The question of the best method of operating in this case was difficult to decide With so extensively sessile a growth, with base concave from side to side, snaring would be impossible, except in small fragments and by following out Ingals' method of galvano-cautery notches prior to adjusting the snare His hemorrhagic tendency also seemed to contraindicate treatment by this plan Curetting, cutting away by knife or scissors also seemed out of the question on the same ground, as well as owing to the obscurity of the situation. Post nasally, but a small portion of the growth could have been reached.

Direct surgical operation by excision of the superior maxillary and palatal bones did not seem to be required, as I did not believe these bones of themselves to be seriously involved. There was no external deformity and the only displacement in the pharynx was a pressure downward of the right side of the soft palate. Electrolysis I thought of, but having had no personal experience of its effects in deep nasal work I finally decided to endeavor to dissect it out, little by little, with the galvano cautery knife.

On December 1, I did uvulotomy to facilitate post-nasal observation. Two days later, after applying 20 per cent solution of cocain I made the first galvano cautery incision through the anterior naris into the lower part of the tumor at its union with the septum continuing the burning until the hemorrhage became quite severe. An astringent spray soon controlled the bleeding. Several days later I repeated the operation in the same way, but at the outer margin of the growth at the site of the junction of the former inferior turbinated with the maxillary bone. The hemorrhage this time was very severe and I found it necessary to plug with tailed tampons of absorbent cotton packed solidly within the nasal cavity. This stopped the flow and twenty-four hours later upon removing them there was no recurrence. After an interval of a week I made the third attempt at galvano cautery work, incising the central portion between the other two cuts. The electrode was of a bright red heat, and it had only been applied a few seconds when arterial blood began to jet out forcibly. The flow was so rapid that with difficulty I caught a glimpse of a large pulsating artery laid bare and opened by the cautery. It seemed to run across from the septum to the external wall. Having had such a satisfactory result from the previous packing, I again resorted to it. The patient lay down in my office and for a few moments the bleeding was checked. Then it began again escaping by the posterior naris and soon became alarming. Dr Reeve kindly came to my assistance and after removing the plug I packed the cavity from behind by the use of Bellocq's canula having first soaked the sponges with a combination of tannic and sulphuric acids. This effectually stopped the bleeding, but the patient was almost pulseless by the time it was accomplished, and two hours later, when being assisted to the carriage, he fainted away. This loss of blood confined him to bed for a week, and two more elapsed before he was well enough to proceed with operations again.

On looking up the literature of fibrous tumors of the air passages, I found that Kaarsberg of Copenhagen, in 1894 recommended electrolytic treatment of fibrous tumors of the naso-pharynx, giving the history of four cases, the treatment being supplemented by the use of the galvano-cautery and scissors and I decided to try it in this case of fibroma of the nose.

After applying a 20 per cent solution of cocain, as in the cautery work, I used long needles, isolated by rubber tubing, and inserted through the anterior naris into the growth at a distance of about half an inch from each other. These were attached to a 12 cell Le Clanché battery. The séances were about five minutes each, and given upon alternate days.

Notwithstanding the anesthetic effect of the cocain, the shock was very painful, even more so than that of the galvano-cautery. The effect upon the tumor was of a deadening nature, making the surface paler and producing exudation. The shrinkage, however, was scarcely perceptible. After using it through the anterior naris three times, I changed the direction of the electric current, by passing a single straight needle into the tumor from the front, and a long curved needle through the mouth and naso-pharynx and into the growth from behind. This seemed to produce a more satisfactory effect. The central portion, both anteriorly and posteriorly lost much of its vivid hue, though the shrinkage produced by four séances was almost *nil*.

Hoping by this time that the electrolysis would have the effect of limiting the severity of future hemorrhages, I again returned to the use of the galvano cautery.

From January 18 to March 15 I operated with it at sixteen different sittings, each time applying the cautery as extensively as I thought I could do with safety. Sometimes there was no hemorrhage, at others it was only slight, never severe enough to require plugging. Little by little I got the growth away. The first half of the operations were performed entirely through the anterior naris, the vision of the parts being obtained through the anterior rhinal speculum. The latter half, also, were done through the anterior naris, while the operations were guided by the posterior rhinal mirror.

To complete the work, as the pharyngeal tonsil was somewhat protuberant, I removed it with Gottstein's curettes as a precautionary measure. The bleeding from the cuts was severe, but was checked without plugging.

In the cautery work, the part I found most difficult to accomplish, and requiring the greatest care in manipulation was the destruction of the part of the fibroid attached to the anterior margin of the Eustachian tube.

The supplementary treatment consisted of daily cleansing with alkalin spray, followed immediately by removal of crusts, sloughs, etc., with the aid of cotton holders and finishing with spray of albolene.

I had sections of the tumor examined by a competent microscopist, he pronounced it a dense close grained fibroma.

With regard to the physical condition of the patient, the course of treatment was very satisfactory. With the exception of the time lost as the result of the excessive hemorrhage, he never lost a day from his professional duties. The operations were always done in the evening. Sometimes he would be restless and suffer pain during the following night, but he could always take a light breakfast and go down to his office the morning afterward. During the latter half of the treatment, notwithstanding the amount of cocain used he improved in weight, as well as in color and spirits, and I am glad to say without acquiring the slightest craving for the drug so frequently used.

One notable feature in the history of the treatment was the extent to which the palate resumed its natural functions. At first being pressed out of position it had no control over sprays thrown into the nose, and would allow them to trickle over and to drop into the larynx with paroxysmal coughing as a result. Latterly this accident would never occur, and the nose might be filled with fluid without any escaping into the lower pharynx. In fact, the control over the velum acquired by the patient aided very materially in the treatment of the case, and during this period I exhibited him to the Toronto Medical Society, so that the members could examine the tumor while still in the process of removal.

I have called this a case of recurrent nasal fibroma, believing that the original attack from which the present one must have developed was really fibroma instead of sarcoma. That the former may degenerate into the latter is, I believe, a recognized pathologic fact, but that a malignant growth could be the parent of a benign one, is certainly open to question.

What the future of the case may be it is impossible to say. At present there is no indication of any tendency to return. A new mucous membrane has re-formed. The throat is moist and the voice normally resonant. Still, that it has been completely and finally eradicated seems almost beyond hope. The case, though interesting, is too recent to base a correct conclusion upon, and I shall watch the future history with more than ordinary solicitude.

DISCUSSION

DR WARD, of Pittsburg, mentioned a case he had under treatment of a young man about 16 or 17 years of age. About seventeen months ago he suffered from the effect of a large growth in the naris and the incidental symptoms, obstruction, retained secretions, etc , were quite marked The growth protruded from the naris and extended backward into the pharynx He was in a pitiable condition when he entered the hospital Dr Ward attacked the growth with the snare and removed it *in toto* The size of the tumor was fully as great as a hen's egg Microscopic examination proved it to be a fibro sarcoma The hemorrhage during the operation was very profuse, but as soon as the growth was removed it ceased of itself A few months ago the growth began to develop again and he was sent back to the hospital What the result will be, it is impossible to say

Dr E Fletcher Ingals, of Chicago, said that he had never had any experience with fibrous tumors in the nasal cavities, but recalled a number of such growths in the naso pharynx which extended slightly forward into the nasal chambers He had removed some with the galvano cautery ecraseur On others, he had used electrolysis with good results, especially in sessile growths where there was difficulty in getting the loop of wire around their base, and he found that they disappeared under electrolysis At present he has a little fellow under observation in whom a fibroid tumor began to grow in the naso pharynx and he had removed it with the galvano cautery It subsequently returned, and in six sittings he was able to destroy almost the whole of that which appeared in the naso pharynx, but it had since extended downward to the malar bone and the nasal chambers This, he supposed, might be called a recurring fibroid of the nose It is difficult to decide how to treat these cases, but as he had obtained good results already from electrolysis, he purposed continuing it after returning home

Dr Logan of St Louis, said that his experience had been in accord with the previous speaker with regard to the prevention of hemorrhage by the use of electricity in removal of naso-fibroma He employs both the electro-cautery snare and the electro-cautery knife and found them useful both in removing the growth and in checking hemorrhage

Dr Cline, of Indianapolis referred to the case of a boy 16 years of age who had been under his observation during the past year He had a pretty large growth occluding the nose and extending into the pharynx, perhaps the size of a small orange The side of the nose was pushed out and the eye was dislocated to some extent With the galvano cautery snare he had cut off about one-third of the tumor, which on examination was pronounced a fibro sarcoma

Dr E L Vansant, of Philadelphia said that in regard to the diagnosis of these cases of tumors occurring in the naso pharynx, as Dr Brown had raised the point in the discussion, he would make the following observation He had made a number of histologic examinations in these cases and had come to the conclusion that the diagnosis depends very much on what part of the tumor the section comes from If it is taken from the outer layer of the growth, you will probably get a very fair specimen of sarcoma, because of the proximity of the mucous membrane and the proliferation of cells near the surface From a deeper layer you will probably get a very fair specimen of fibro-sarcoma or fibroma In these cases there are large venous channels which are likely to cause troublesome hemorrhage In some parts of the growth there may be spots of softening, and sections through them may give the appearance of myxema, myxo-fibroma These are due to a process of degeneration, the tumor being at first a fibroma, which undergoes sarcomatous change, subsequently myxomatous degeneration takes place, forming cysts in the growth The fact that these large vessels are formed, explains the hemorrhage, unless the galvano cautery is used He declined to say whether the paper had the proper title or not

Dr Price Brown in closing, said he was glad that his paper had brought out the history of so many cases In one respect his case differs from other cases reported , it was a sessile growth over the whole cavity of the nose, springing from the upper part of the septum the vault above and the middle turbinated body on the other side He was glad to have his experience with electrolysis confirmed both by Dr Ingals and Dr Logan, and especially in regard to its value in reducing hemorrhage He had some doubts about the correctness of the title of his paper The growth had been at first pronounced a fibroma by doctors who had seen the patient, and it was regarded as sarcoma when it was removed in Boston Three years later it came to me and I considered it fibroma It would be of interest to know if it can be properly called a fibroma if the preceding growth was a sarcoma

The Chairman—Was the growth after both operations examined by the same men?

Dr Brown—No, it was not

STATE MEDICINE vs FADS

BY GRANVILLE P CONN, A.M , M D

CONCORD N H

It is often interesting, as well as instructive, to take a retrospective glance over conditions that apparently have taken the lead in shaping popular opinion In professional work this is quite as fascinating as it is to follow the ordinary topics of the day In the present, matters that are non sensational are relegated to the background, giving place to topics that can be made to excite the imagination, and help to create a sensation Out of this has been developed the fad of being interviewed by a representative of the public press , in which, many times, the person being interviewed is shrewdly made to say what the publishers of the paper or journal believe will be graciously received by its patrons This seems to have extended to all classes of society until it has become a profession The ward politician discourses eloquently on the financial problems of the day , the would be statesman is represented to have decided views upon questions involving international law , ministers and lawyers do not hesitate to boldly proclaim to the world the necessary reforms to save the country, (yet it is rare that any two agree upon the plan of its salvation) , the physician and surgeon allow professional work of the most sacred character to be heralded through the columns of the daily press as a consequence of reporters being present at operations, or of bulletins being issued daily, describing the physical symptoms of some prominent patient In either case, by using the clinical phraseology of the surgeon or physician in charge, the language may be made so effusive as to leave the reader in doubt whether it is intended for the purposes of stock exchange, or for complimentary allusions of a mutual admiration society

These professional fads have been developed from time to time, and it has always been the province of rational medicine (which is only another name for State Medicine), to assist in showing up what is fallacious and promoting the growth of what is good State or preventive medicine is doing the same to day, and to meet these questions successfully must adhere strictly to the truth, or to what can be satisfactorily demonstrated, without recourse to what may be justly denominated imagination and theory

These conditions have been developing rapidly during the past decade Conservatism seems to have been lost in the desire to bring before the public matters that would allow a greater range of the sensational, and solid facts have been made to give place to results that have been illusionary in their character

In our professional work, preventive medicine may not seem so brilliant as surgery, nor so seductive to the general practitioner as the administration of drugs, yet the fact that a life may be saved without the intervention of either the knife or a drug, is a most gratifying result to the average human being The advanced position that surgery has taken since the close of the late war, has been almost entirely along the lines of hygiene The Army surgeon was oftentimes brought in contact with much that was suggestive, and with the broad and brilliant mental capacity which he must necessarily have in order to succeed, saw much appear that he would wish to improve The unfortunate surroundings, the unhygienic condition of the person, the immense amount of practical surgery that must be done in a short period and that under the most depressing conditions and without adequate supplies, all tended to awaken in the mind of the thoughtful physician and surgeon the idea that something was needed to complete a good work and make success the rule rather than the exception In this long struggle from 1861 to 1865, it did not take but little time to educate the surgeon to the fact that cleanliness was the foundation stone on which rested the art of surgery As a result, Listerism, Pasteurism, and various other "isms" began to assume vast proportions soon after the war closed Like a great many other things, it was considered so commonplace to be clean that it was overlooked and, therefore, when brought into prominence the pendulum swung to the other extreme and a variety of terms were used to express the hygienic conditions imposed

I well remember, about 1871 or 1872, of attending a convention of the Connecticut River Valley Medical Association, at Bellows Falls, Vt, and meeting Dr H D Holton, of Brattleboro, who had arrived home within a week from a long visit in England, where he had passed considerable time in the hospitals He came back imbued with the idea that Listerism was the all important adjunct to surgery In somewhat lengthy and interesting remarks before that Association, he went into details of the work as performed by Mr Lister, and dwelt particularly upon the fact that all the operations were performed under spray He was particularly emphatic in that especial factor as having such wonderfully good results whenever an operation was being performed, and especially in abdominal surgery

I remember very well that at the close of his remarks the late Professor Phelps of Dartmouth College who was sitting very near, and who gave him undivided attention during his whole discourse, rose up and taking him by the hand said "Brother Holton, you have got it bad, but thank God, it isn't a fatal disease Listerism is having its day, but we shall all live to see that it is simply a matter of keeping the patient clean ' Professor Phelps has passed away Dr Holton is still doing good work, and is not obliged to use the spray in order to keep his patient clean

It is unnecessary to remark that surgery has made most wonderful strides within a few years, and we naturally ask the reason for this great advance We are told that it is due to the practical use of asepsis Now the term "aseptic" does not mean near so much to me as does the good old Anglo Saxon phrase of "being clean "

The terms sepsis, antisepsis, disinfectant, disinfection and a host of other such phrases have been sprung upon the profession by the chemist and the pharmacist who have had something to sell, and consequently were always ready to assist the most conservative members of the profession by loading them down with various compounds, labeled with unpronounceable names These chemic compounds may have their use, and at certain times may have some influence in overcoming what would otherwise be septic, but to my mind true cleanliness which can be brought about with soap and water and a scrubbing brush, is necessary before we place our faith in any of these compounds

In the hygienic conditions involving a surgical operation or a surgical dressing, we should always demand true innocence instead of repentance, for repentance of the evils done in this world does not benefit the victim of a polluted water supply, contamination of food, nor of the consequence of preventable septic poison Good may come to others from such teachings, but to the friends of the victim a life is sacrificed to ignorance or stupidity, for it might have been different had there been proper care exercised

A few weeks since, under the head of "Up-to Date in Surgery," the *British Medical Journal* said in a rather sarcastic way "Modern surgery is heroic enough to please the grim prophet of hero worship It seems to have taken Danton's motto, which in English would be rendered, 'audacity, audacity, and still *again audacity* '" This calls to mind the language of that most estimable wife of our distinguished compeer, Dr John G Blake, of Boston, who, when traveling through the mountain passes and canons of Colorado and New Mexico, and asked her impressions of the scenery, replied "I don't know which to admire the most—the royal grandeur of nature, or the audacity of man as exhibited in the extraordinary feats of engineering skill ' So, with the surgical work of to-day, we are sometimes at a loss to describe our feelings as to which we admire the most, the physical beauty of God's creation, or the audacity of man in his defense of the physical body against disease

Continuing the quotation from the *British Medical Journal*, the writer says "Almost every week one hears of some surgical Alexander cutting his way to fresh conquests Is it not unnatural, therefore, that nearly every ambitious surgeon should see in the knife his '*In hoc signo vinces*' In the hands of a skillful operator the knife doubtless can work greater wonders than the fabled wand of the magician, but it should be reserved for difficulties worthy of so noble a weapon As Falstaff says of the English nation, it may be said that it was always the trick of our profession, if they have a good thing, to make it too common We can not help thinking that the knife is made a trifle too common "

Again he says "This is quite in the spirit of 'advanced surgery, which, in the words of one of its chief professors, thinks no more of opening a patient's abdomen than a man does of putting his hand into his pocket Is the day coming when a cold in the nose will be dealt with by Rouge's operation, and bronchitis treated on 'surgical principles' after preliminary opening of the windpipe?"

This is strong language, and yet to some extent it is worthy of our consideration, as at the present time there is a great predisposition for some people to become wedded to fads, and just now surgery, especially that of the cranial and abdominal cavities, seems to take the lead in the profession With the improvement and advancement made in the hygiene of such work, the opening of these cavities has become nearly or quite without any expectation of harmful results It is a matter of congratulation that every member of the profession should be allowed to have the ambition to go forward and perform all manner of operations, yet, on second thought, we must admit that only a comparatively few, in a sparsely-settled country, can become experts Continued and daily practice becomes a necessity for good work, especially where delicacy of touch and manipulation are required The same is true in regard to the hygiene of an operation, in order to prevent contamination or sepsis It appears to me sometimes, that we are prone to give our attention almost entirely to the opening of cavities, especially so far as the prevention of sepsis Our books and our journals are full of instructions, especially in the opening of the cranial and abdominal cavities, and while they give you some general instructions regarding the minor operations, yet they are comparatively silent on such matters as are of daily occurrence to the profession at large

It is only recently that I have observed in text-books or in journals any allusion whatever to the preparation of a patient for so simple an operation as vaccination as it is generally understood that everybody must know how to vaccinate In fact, it has become so common that the laity themselves think they can do it just as well as physicians, and all of us have had experience with that class of people I believe the time is coming when by the use of preventive measures the operation for vaccination will be made one of importance, in which the arm, clothing and the surroundings will be made as nearly perfectly clean as it is possible I have remarked to medical men and others that if we would approach a child who was to be vaccinated, and prepare the arm and the clothing and all the surroundings with the same care that we would if we were going to open the abdominal cavity, we should have far less trouble, there would be far less complaint of sore arms, and the possibility of other troubles, aside from the vaccine virus taking hold of the system of the patient It is not my purpose to speak particularly of medicine or those auxiliaries of surgery beyond that of preventive means relative to surgical operations I have great respect for the pharmacist who has been of value to the profession in bringing certain things to our notice, but I object to his assuming that we can not get along without him The truth is, this work of advancement began and was made possible by our professional knowledge of hygiene For some years before 1861 there had been but little advancement in surgery, which at that period was almost entirely confined to the extremities Suppuration was the rule, and although the text books taught that we might get union by first intention, yet they signally failed to teach us how it could be achieved A good story is told of a surgeon and house officer of the period of 1870, and the same again in 1894, which runs as follows

In the year of our Lord, A D 1870 Scene surgical ward

SURGEON How is Jones doing?

HOUSE SURGEON Extremely well, sir, the wound is suppurating nicely

SURGEON That's all right

Time In the year of our Lord, A D 1894 Scene same surgical ward

SURGEON How is that amputation of the breast?

HOUSE SURGEON I'm sorry to say, sir, the wound is suppurating

SURGEON What! Suppurating! Do you say suppurating? Well I'll be ———

It is true that McDowell and some others had opened the abdominal cavity, but in doing this wonderful operation they had brought down upon their heads the scorn and the abuse of the majority of the profession, for they had utterly failed to give any reason why such operations could be safely performed While hygiene was known to be as old as the world itself, its simplicity was so universal that it had fallen from its high estate and had become one of the lost arts It is to be remembered that in Holy Writ, we find in the law of Moses, much that pertains to hygiene and sanitation, and I sometimes wonder if it is because we find those matters in the Bible that so few seem to know that they ever existed But whenever we look this matter over and come down to the vital principle, we are always confronted with the same thing, viz, that cleanliness is the foundation of all good surgical work No matter how much we may have of carbolic acid and various other drugs and chemicals which are put upon the market and advertised largely, without cleanliness, without soap and water and the scrubbing brush, we shall utterly fail of doing good work These are the hygienic measures on which surgery depends, and without which surgery would soon fall back to the low estate which it had prior to 1860 The most of the compounds which are placed upon the market are empirical in their character, and cost out of all proportion to the good work which they may be expected to perform I am always suspicious of any man or physician who indulges in rhapsodies over some new medicine or compound We should look out for him He will bear watching carefully, for he may be but an advance agent, and is talking for the money in it, the same as the advance agent of a circus, or any other advertising agent Many drugs and surgical supplies are advertised in our medical journals in which we have no confidence, and while there may be members in the profession who use them, yet it is generally expected that the public will purchase, rather than the profession The advertising which some of these compounds get is simply ridiculous, and should not be tolerated by any member of the profession, or even any person of common sense

The following item regarding a wonderful medicine is taken from the *New Idea*, and is presented you as an illustration of an extravagance in language that none but a mountebank or charlatan would assume, and yet it is only in a line with the exalted conditions the commercial traveler, representing manufacturing firms, would have us believe, and should we venture to express doubts regarding the infallibility of their compounds being as efficacious as their expression of confidence would lead one to expect, they seemed pained at our ignorance, and sometimes actually intimate or insinuate that you are but a back number The item was as follows

"Chetterback's Balsam of Balsams Nature's Palladium Should you chance to have your brains knocked out, or your head chopped off, two drops of this seasonably applied will recall the fleeting spirit, reenthrone the deposed arch, cement the discontinuity of the parts, and in six minutes' time restore the lifeless trunk to all its pristine functions, vital, rational and animal"

To which the editor comments as follows

"A full bottle of this will also make a sausage wag its tail and bark, and a jar of extract of beef, bellow or give milk"

Barnum once made the remark that the public loved to be humbugged and the suggestion has been acted upon by the maker and vender of patent medicine for many years

Fortunes have been made, human beings have been drugged, and the constitution of future generations has been impaired, until the philanthropist and the reformer should at least class this evil with that of intemperance

It is not strange that the manufacturer of pharmaceutic preparations and surgical supplies, in the sharp competition of business, should fall into the same line, and shrewdly making use of the profession to bring out his products, be able to build up large business plants, and from his profits rival the dealer in patent medicines, in the elegance of his mansions The physician and surgeon should always think for himself The profession should direct public opinion on all matters of professional interest, instead of having it brought round in the grip of a commercial traveler The surgeon should never confidingly allow the use of some compound when he is not thoroughly informed of its chemic constituents We know that absolute cleanliness, with abundance of air made absolutely aseptic by the great cleansing power of heat will prevent infection from without, and give our patient every chance from the possibility of auto infection from within

One other matter I would like to bring to your notice It is true it has not thus far been intruded upon the surgeon to the extent that it has been upon the physician, but I anticipate that ere long some bold disciple of the commercial travelers union will come round to our office with a gripsack full of samples, for the relief and cure of such a variety of surgical diseases "that,' using his own language, "no reputable surgeon would ever be without a large stock ready for immediate use ' The following from the pen of one of our profession, ever ready to meet imposition in every form with ridicule and pungent wit, will serve to invite serious thought and investigation into a class of remedies that is being heralded to the world with all the brazen effrontery of empiricism I give it to you as only a partial list of extracts

> ' An extract of muscle for rheumatic pains,
> A gray-matter extract to nourish our brains,
> An extract of teeth for a man that can't chaw,
> A maxillary extract to cure lock jaw,
> An extract of ocean to cure mal-de mer,
> A hirsute extract for those without hair,
> A duodenal extract to serve a good turn,
> In healing the ulcers that follow a burn,
> An extract made out of a whole population,
> To rescue some housewife from sterilization "

Medical journals wielding considerable influence in the profession, unblushingly open their advertising pages and with sensational head lines intimate that any one who reads can be raised from the depths of despondency, if they will only send for these specifics To the reflecting mind it seems as if any educated person would at once distrust such dogmatic assertions, yet in the present, it is becoming a fad to follow the bacteriologist and the biologist through the devious pathways of the laboratory, and accept the diagnosis of the culture tube without question

True scientific investigation and its deductions should be the admiration of every member of the profession, but do not be in such hot haste to accept conclusions as to overthrow and trample upon such common sense opinions as have been set forth by State Medicine, as well as the axioms and aphorisms of the science and art of medicine and surgery that have been in the past and must be in the future, beacon lights to guide professional opinion, thereby avoiding the dangerous shoals of dogmatic assertion and empirical insinuation

The bacteriologist and biologist are doing good work, but many of those performing the most labor in this department are not practical physicians and surgeons, and therefore do not test the results of their own study Should such students become enthusiastic and fascinated over the secret processes revealed through the culture tube and the microscope, will it be always safe to follow in their lead without something more than theoretical assurance? I have great respect for newspapers and medical journals, as well as for the enterprising men who serve as the medium of communication between the people of different sections of the world, yet they oftentimes defeat a good object by prematurely bringing before the public the work of the scientist Less haste and more conservatism would develop less fads, but more real science The sensational might be far less prominent, but real worth would be a solace to the profession

A summary of this paper may be concisely stated in a few words

Always investigate for yourself Do not allow " isms' nor fads to become a part of your daily prescriptions Hold fast to that which is good, and promptly discard all that will not bear a searching scientific investigation, under a light as strong as the noonday sun

And lastly with a thorough knowledge of hygiene, therefor fully realizing the powerful influence of State Medicine in counteracting the deleterious effects of fads and theories that are but a figment of the imagination (fostered by minds already dazed by an all-absorbing desire for pecuniary gain), we should not forget that in surgery we have in absolute cleanliness the true foundation of practical success

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THE NATURE OF A DELUSION

BY J SANDERSON CHRISTISON, M D

CHICAGO

My article entitled, " The Essential of Insanity," which appeared in the JOURNAL of October 19 contained an argument supporting the proposition that " where there is no delusion there is no insanity, for the mind that is competent to comprehend facts and their bearings within the scope of its education and the limits of ordinary surroundings is a mind capable of correction on any error, and conversely, a mind that is not thus competent must of necessity beget delusion of one form or another which it is as incompetent to discharge, no matter what the evidence combating "

Since the presentation of that article for publication (last spring) I find in the present autumn number of *Brain*, p 328, the following words of Prof C Mercier, of London, in his discussion of a paper by Dr Batty Tuke Dr Mercier expresses his gratification at Dr Tuke's complete acceptance of the doctrine, which, says he "I have long held and preached but which has never before, as far as I know, had any adherent, that insanity and disorder of mind are not convertible terms and that disorder of mind—grave and prominent disorder of mind may exist in a sane person and without the question of insanity being even raised "

When two such authorities so enunciate, I think I am very nearly cleared of heresy in my proposition and believe the day is dawning when doctors on the stand will be less confused and confusing on the subject of insanity

In the same article, I also asserted that a delusion had three components or elements of aberration, viz, 1, error of fact, 2, error of inference, and 3, illogical tenacity

1 The basis data or premises of a delusion are not all true and they are not necessarily all false, but must contain some error or illusional feature or hallucination in any case This is evident from the law of association which requires at least one quality or idea for a leader to bring others into a particular relationship, fitting or false, otherwise an inference or delusion could have no attachment and therefore no existence The error may be supplied by the senses or the imagination or may exist subconsciously, as when the delusion takes the form of a feeling or emotion or impulse

If the law of the association of ideas were inoperative chaos would result, and if only partially operative as in the delusional state, the same result would take place, viz, error of fact, as we would have jumbled facts—or facts in malposition giving erroneous perceptions A part truth is an untruth But the law of association more or less prevails except in recollection which is a voluntary act and is necessarily affected owing to reduction of will power Memory, which is technically the term for the conservative faculty, but is also used to mean the involuntary return of ideas to consciousness through natural or habitual association (as in the lower animals), continues comparatively unaffected as it is operative in all passive states of mind, not preoccupied

Again, as the mind is a unit (its faculties being but interdependent modes of activity) and as it is the same faulty mind which perceives the basis data that conceives their relationship, it is evident that to suppose it correct in the one case and not in the other is to assume that an insane mind can be sound and unsound almost simultaneously

Everyday things and things that are common, habits that are automatic or almost so from repetition, and arguments or reasonings that have become habitual or familiar, are less likely to be affected than those requiring consideration or of recent acquisition and thus much of an insane person's behavior and talk may be quite normal or even smart Accordingly much of the basis data of a delusion may be true with one or more of the less familiar facts distorted through imperfect attention, or an entirely false one may be obtruded by hallucination

2 That a delusion also contains an error of inference—an illogical deduction from the data as they appear to the subject, is evident from the last reason given for error of data If the mind is accurate in perception there can be no basis for a delusion and therefore no delusion, and conversely, if it is accurate in inference, it is capable of being accurate in perception and the delusion would dissolve as is the case in restoration from insanities

3 By illogical tenacity I mean the irrational persistence of the delusion in the face of positive and contradictory evidence sufficient to refute, so that the delusion is maintained, not because of ignorance—which is chiefly the case in common or simple delusions—but because of volitional inability to direct the mental operations beyond the ideas as they appear to the subject In other words, the attentive power of the mind has become subjective to elementary details rather than the associating principles and, as a consequence, the last conception is retained simply from the lack of the cerebral energy requisite for a progressive mentation which would give the correction A patient may argue rationally along lines of previously established habit on common knowledge even with reference to a delusion, the birth of which may only be accounted for in the same way that we account for an intuition—a subconscious action of previously acquired ideas true or false

CONFUSION, EMOTION, IMPULSE, FEELING

Psychologically, I do not distinguish any essential difference between what are called insanity of conduct (a form of hysteria), insanity of feeling (impulse), moral insanity and such a distinctive form as homicidal mania The subjects all, to a certain extent, know what they do at the moment of committing a crime But when not shamming they are impelled to their acts by the domination of a delusion which they can not overcome Whatever is not purely automatic is more or less a conscious act (even including somnambulism and hypnotism to a limited extent with forgetfulness following) and as such, must be the product of an idea, right or wrong, distinct or confused If all intellection ceases, what is to direct or move the hand and foot? The will can not act without an idea, no matter how perverted the mind may be The nervous individual who ascends to a giddy height and experiences an impulse to jump from it, should he jump is impelled by the delusion that he must do so, which is insanity, as the facts facing him confute the necessity for the act

That a correct minded person should become possessed (as many allege) with such a feeling, notion or impulse, whichever you choose to call it, and be actuated by it, is simply inconceivable In cases of such extraordinary morbid feeling there must be an existing cerebral perversion—a delusional basis which breaks from its last thread of reason by the strain of the situation which may focus the ideational confusion into a delusional impulse, but which may have had a previous conscious existence I have never heard of any one jumping under such circumstances except suicides But we occasionally meet with persons who have experienced such alarming neurasthenic feelings but managed to control them as the normal will still ruled

Confusion, feeling, emotion and impulse are simply degrees of ideational activity without a corresponding degree of self control, and thus the delusion existing may be indistinct

The moral crook (kleptomaniac, pyromaniac, etc) who keenly appreciates his unenviable predicaments, is another neurotic who may have a dominating delusion, although in some cases acquired as a habit and only at times or periodically in action Like the hysteric or epileptic, his conduct has a motive idea or cause that is often obscure and perhaps immediately forgotten after the act, but none the less insanely delusional for the time being

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A Sure Testimonial.—From the New York *World* Patent Medicine Agent "Madam, did your husband use the bottle of Professor De Fakir's Animal Extract I left him"

Wife 'Yes It took immediate effect "

Agent 'Good' Then you can conscientiously say that he will use no other?'

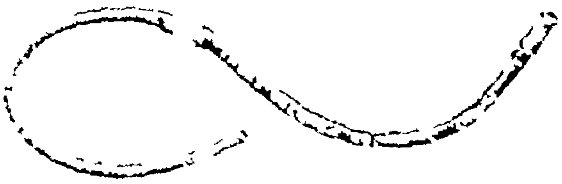
Widow "I'm quite sure I can He is dead'

NEW INSTRUMENTS

AN AURAL MASSEUR

BY FRANK ALLPORT M D
PROFESSOR OF CLINICAL OPHTHALMOLOGY AND OTOLOGY IN THE MINNESOTA STATE [illegible] EX-PRESIDENT [illegible] NESOTA STATE MEDICAL SOCIETY ETC
MINNEAPOLIS MINN

The question of the benefits derivable from aural massage in middle ear affections is still unsettled, but many advocate its employment Improvement doubtless occurs in some cases under its influence, and the necessity for a good, efficient, cheap and handy instrument is apparent These merits can all be obtained in the appliance here described, the principle of which was suggested to me by my friend Dr W N Porteous of this city



The instrument consists of a piece of thick rubber tubing, one yard in length, of dark color, to prevent soiling The tubing is severed in the middle, and some glass tubing inserted to connect the two ends In this glass tubing is loosely placed some cotton The object in thus inserting the glass tube and cotton is to insure cleanliness to both surgeon and patient, as it prevents anything passing from the patient's ear to the surgeon's mouth, or *vice versa* As the cotton is *apt to pass out of the glass tube* during the massage treatment it would be better for the surgeon to fasten it in the tube by a drop of mucilage On one extremity of the tube is impressed the word "Mouth," showing that this end is for the surgeon's mouth This extremity is also fitted with a hard rubber mouth-piece The other end is impressed with the word "Ear," showing it is for the patient's ear The rubber is here left free and soft, as it can thus be best fitted into the meatus and its insertion is unaccompanied by pain

When it is desired to use the instrument, one end is securely placed in the patient's meatus and held there by the surgeon The other end is put in the surgeon's mouth and suction applied as weak or strong as is desired By sucking in and out, as it were, a vibratory movement of the drum-head and ossicles may be obtained, which can be continued as long as is thought proper—but a minute or so will probably be sufficient

Care must be taken not to proceed with this application too vigorously, as great force may be obtained and unfortunate results produced, such as a rupture of the drum-head, blood blisters in the meatus, etc

SELECTIONS

Report of 1,000 Goitre Operations—(Kocher, at the twenty-fourth Congress of the German Society for Surgery, April, 1895) When Kocher presented to the Congress the report of his first 100 operations twelve years ago, he pictured clearly the strumous cachexia In the last 900, never has the strumous cachexia been presented, except in one case After deducting the malignant cases, which demanded complicated operations, out of 870 cases only 11 died, and this number includes such cases as were *in extremis* on admission to the hospital Five deaths were not directly chargeable to the operation, three were cases of Basedow's disease, the latter showing the justice of Mikulicz's decision that the operation is more dangerous in Basedow's disease than in simple struma Therefore in such cases Kocher disregards complete excision and is satisfied with a ligature, and ties only three arteries In one case in which four arteries were tied, tetany set in immediately Of the simple, uncomplicated cases only three died In the last 900, there was no death from chloroform, in the first 100, one One case of bronchitis from ether with fatal outcome is noted In general the anesthesia was started with chloroform and continued with small doses of ether With severe dyspnea it is better to operate under cocain, which is well borne Only two deaths were due to infection, and both were secondary operations There was one series of 272 operations without a death Although these favorable results fill us with pride, yet the patients would be more thankful and it would be a triumph of science, if the prevention and cure of goitre could become merely a question of rational nourishment The researches of Kocher's assistants, Lang and v Trachevsky, have now shown that long-continued thyroid feeding will diminish the size of a goitre and even bring on a condition of atrophy, so that the danger lies in abolishing the function of the thyroid Though these experiments were carried out on animals, yet they are important Kocher has, in connection with v Trachevsky, extirpated the thyroid in pregnant animals with the view of ascertaining whether fetal cretinism can be produced And in fact rachitic young have been born Further, v Trachevsky has demonstrated that atrophy of the thyroid can be induced by administration of phosphates And already Kocher has shown that a rapid improvement in Basedow's disease follows treatment with sodium phosphate v Trachevsky draws the conclusion from this that the condition of the thyroid stands in close relation to the amount of phosphate in the human body And the assumption is not far removed that the growth of a goitre can be influenced definitely by suitable feeding In proof of this Kocher has shown two photographs of a man (before and after treatment with thyroid juice) in whom a colossal struma completely disappeared in one and one half years under purely dietetic treatment—*Centralblatt für Chirurgie* July 6 1895

Thyroid Feeding for Syphilis—From the military hospital at Warsaw comes the account of the internal use of fresh thyroid gland from an ox in a severe case of secondary syphilis which had not improved under mercury and iodid of potash The thyroid was cut into small pieces reduced to a pulp and fed to the patient with bread butter and salt Improvement began on the third day The deep ulceration of the nose and ear soon healed Temperature fell, appetite improved, and weight increased There had been great emaciation The patient complained at first of nausea, palpitation, and trembling of extremities, and the pulse rose to 120, but these symptoms disappeared The dose at first was 2 grams, with a daily increase of 2 gm until 14 was given, and the treatment was omitted every third day—*Wiener klinische Rundschau*, Sept 15, 1895

Autoscopy of Larynx and Trachea (examination without mirror)—Kirstein applies this title to a method of direct inspection of larynx and trachea by the eye alone, and he insists that it is possible in many cases even as far as the bifurcation After application of cocain to pharynx and epiglottis, the patient is placed in the horizontal position with head hanging over the edge of the table The autoscope is a short, thick semi-cylindrical instrument, joined at a right angle with a Casper's electroscope This is introduced into the mouth, moved along the posterior wall of pharynx to the level of cartilages of Santorini, then pushed forward by a quick upward movement, by which the tongue is pressed forward and the epiglottis raised Now under favorable electric lighting the larynx and trachea can be directly inspected, and the autoscopic picture is far superior to that with mirror—*Wiener klinische Rundschau*, July 21, 1895

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SATURDAY, NOVEMBER 16, 1895

THE PASSING OF HYPNOTISM

Hypnotism as a therapeutic agent is now having its day in regular medicine, but it is a day that is probably well past its meridian The belief that it has its dangers and that these overbalance its possible benefits has grown within the past few years, and the number of regular physicians who use it in their practice is probably very markedly on the decrease It is legitimate to utilize pathologic conditions and even to produce them in therapeutics, but it must be demonstrated as of utility on reasonable *a priori* grounds, or, at least, have the best of clinical and experimental evidence in its favor to make it expedient or justifiable When, with a better knowledge or theory of the condition the *a priori* deductions tend to its disfavor as a healing agency, only the most decided clinical proofs of its value, applying not only to immediate but also to remote results, should be required before its use in the treatment of disease is countenanced to any extent

The revival within the past sixteen years of interest in hypnotism, the claims of the Nancy school and the published accounts of the experiences and practice of numerous physicians and scientific men of repute such as FOREL, VOISIN, BENSWANGER, BRAMWELL, and others, have given it a certain status in legitimate therapeutics, considerably beyond what it possessed in its former period of cultivation some fifty years ago

It is probably not known to the general medical public of to-day, or if known is forgotten, that at that time it had its popular pseudo scientific standing and was investigated by men of science, who came to very much the same conclusions as those of the present day This fact has been well shown by DR J G KIERNAN in a paper published in the *American Journal of Insanity* at the beginning of the present year, he shows that the earlier alienists of this country *recognized the dangers of hypnotism*, its psychologic basis, and the element of morbidity that is required to predispose to susceptibility The outcome of the whole at that time was to relegate it back among the pathologic curiosities of little practical value, and it slumbered, in a medical point of view for over thirty years

It seems probable that we are to see history repeat itself, and that before many years the medical profession will drop hypnotism as a therapeutic agent, at least, that will be the general if not the universal rule, and that its use will be mostly confined, as it was during the years between 1848 and 1880, to the irregulars outside of the recognized schools of medicine That is its tendency at the present time, and while some unquestionably able men are still experimenting with it, a too great credulity as to its value and powers has seriously injured some high scientific reputations, that of LUYS of Paris, for example, among others We need not particularize here on what may be rightly called the thoroughly disreputable therapeutics of hypnotism, as applied by certain prominent German physicians—they have before been editorially alluded to in the JOURNAL

The dangers of hypnotism are already indicated when we consider its close relationship to hysteria and to hysterical conditions which has been shown by CHARCOT, GILLES DE LA TOURETTE and others in France, Germany, and elsewhere Of all pathologic conditions hysteria would seem to be one of the least likely to be therapeutically useful, and the utilizing of hysteroid anesthesias and other disturbances of consciousness, going so far, even, as to the production of what may perhaps be properly called epileptoid conditions of double consciousness and amnesia, without regard to the after effects of such disordered cortical functioning, is not a procedure that ought, it would seem, to be countenanced as a legitimate method of treatment of any condition, a condition, moreover, in which the will is in abeyance is not a normal one and its tendency must be to weaken the inhibitory power of the brain and change its functions, possibly even to the extent, in some cases, of producing serious mental disorder As HACK TUKE mentioned, some thirty years ago, hypnotic conditions have in a fashion something of the character of an induced temporary insanity, and their too frequent repetition may make the derangement a permanent one Such has undoubtedly been the case in not a few instances, to say nothing of the aggravations of hysteria and even the production of epilepsy in some cases The dangers of hypnotism are real, and the fact that the majority of the victims escape the worst of them, does not in any way excuse the reckless ex-

The discovery of the aerobic modification of *Bacillus tetani* in mixed cultures is not original with CARBONE and PERRERO, since the fact has been noted by other bacteriologists, as BELFANTI, SANCHEZ TOLEDO, and VEILLON, and the same variation has been observed with the bacillus of malignant edema by PENZO. More recently still, this very interesting symbiotic relationship of the aerobic and obligate anaerobic bacteria has been experimentally studied by KEDROWSKI (*Ueber die Bedingungen, unter welchen die anaeroben Bacterien auch bei Gegenwart von Sauerstoff existiren können, Zeitschrift für Hygiene*, Bd XX, Heft 3, 1895), who has shown that the tetanus bacillus and an anaerobic species obtained from butyric fermentations grow readily in the atmospheric air when associated with a number of species, both of strict aerobes and of facultative anaerobes.

ADENOMAS OF THE LIVER.

Among the new growths occurring in the liver, the adenomas should have a peculiar interest for the pathologist and clinician, both on account of their relative frequency in this viscus, as well as their interesting structure. This latter has given rise to considerable discussion, and at present the consensus of opinion seems to be that these tumors are so intimately allied with the carcinomas on one hand, and the cystomas on the other, that no sharp line of distinction can be drawn.

Like most questions connected with pathology and pathologic histology, it is only in the present century that adenomas have been recognized as a distinct pathologic entity. The recognition of the finer details is a question of the last few decades. First noticed in the mammary gland, they have been successively described from other glandular structures, until they are known to occur in the breast, kidneys, liver, salivary, sweat and lacrymal glands, the glands of the stomach and intestine, etc.

In 1829 the famous surgeon SIR ASTLEY COOPER, described a "chronic mammary tumor" occurring principally in females from 17 to 30 years of age, and differentiated it from regular hypertrophy of the breast. Ten years later VELPEAU mentioned the occurrence of "fibrinous tumors" which he thought were caused "by the organization of a greater or less quantity of blood or other matter extravasated into the breast, following a blow, contusion, etc." In 1850 LEBERT[1] described four tumors of the breast markedly differing externally but agreeing in presenting glandular cavities internally, lined with epithelium. He considered them to be the same as the chronic tumor of COOPER and the fibrinous variety of VELPEAU. From this time on, our knowledge of the growths was rapidly extended by various investigators.

If we were inspecting a liver containing adenomata, we should find the organ enlarged as a rule, the surface generally nodulated, though sometimes the growths are hard to find, and the organ must be nearly "hashed," as one author expresses it, to discover them. The tumors are of various sizes, from a grain of wheat up to a small orange. They are multiple, and as a general rule the smaller they are, the more numerous. The color is sometimes grayish yellow, if infiltrated with blood reddish, but mostly of a decided golden yellow, contrasting strongly with the rest of the organ.

Microscopic examination shows the growths to be made up of little *culs de-sac* of epithelial cells turned in various directions and bearing a more or less close resemblance to a gland, seeming as if some one had started to make a gland and then abandoned the effort, leaving the material strewn about. As a rule, two general patterns may be noticed—the tubular and the alveolar. These epithelial deposits are surrounded and supported by a stroma of connective tissue which may be thick and abundant or thin and sparse.

As already stated, our adenomas are closely related to carcinoma, hence there is the usual diversity of opinion as to their true nature. MM KELSH and KIENER[2] claim an adenoma is merely a form of special irritative hepatitis, a special epithelial cirrhosis. SABOURIN[3] sees in adenomata a true epithelioma, but of specific nature, a reaction of the liver cell from the influence of some unknown cause of irritation. QUINQUAUD[4] looks upon these growths as nothing but cylindrical epitheliomas. BRISSAUD[5] claims an adenoma is an epithelial tumor which may be transformed into a cancer at any moment. Finally, MM. HANOT and GILBERT[6] in their classic treatise look upon adenoma as only a name given by the earlier writers to a variety of primitive cancer of the liver.

This diversity of opinion is found also when the origin of the connective tissue stroma is explained. SABOURIN remarks: "While the walls of the capillaries are not modified by cirrhosis, the adenomatous cylinders are destitute of proper walls like the hepatic trabeculæ which they replace." Thus adenoma seems to be only a complication or an accident in the cirrhosis. According to LANCEREAUX[7] the cirrhosis is secondary and is a result of the neoplasms developing in the liver. KELSH and KIENER as well as HANOT and GILBERT think the cirrhosis and the adenomas develop simultaneously under the influence of the same irritating agent.

The pathogeny is still obscure. As regards age they are an appanage of early life, those of the rectum are especially frequent in children. BROCA[8] gives a table of ninety cases in various glands, in forty-two, the ages were less than 30, in twenty eight, from 31 to 40, and in only twenty was the age over 40 As LANCEREAUX remarks [9] "This shows the genesis of these tumors to be related to the period of formation or development of glands"

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[1] Bulletin Soc Anat, xxv, 11

Arch de Physiologie 1876

[3] These de Paris 1881

[4] Tribune Medicale, 1875

[5] Arch Gen de Med 1885

[6] Traité des Mal du Foie, 1886

[7] Union Med 1886

[8] Traité des Tumeurs I, p 446

The symptomatology recalls both that of cirrhosis and that of cancer The onset is often made and ushered in by divers digestive troubles, disgust for food and especially meat Dull pains occupying all the abdomen, especially the right hypochondrium and increased by profuse meteorism, ascites and wasting follows rapidly The volume of the liver varies, if cirrhosis predominates it is small and retracted behind the ribs, most often it is increased in size, the surface hard and nodular, the subcutaneous veins of the abdomen are dilated [10]

The spleen is of but little importance from a diagnostic standpoint, for according to HANOT and GILBERT, it is as often small as hypertrophied Icterus is present nearly constantly, while vomiting, intense from the onset as a general thing begins slowly and progresses steadily until the end Contrary to what we see in other forms of cirrhosis, hematemesis, melena and albuminuria are exceptional LANCEREAUX has observed an anemic cardiac murmur in some cases

As regards duration of the disease, after it has existed a few weeks or months the phenomena are aggravated, vomiting is frequent, dyspnea is continuous and the patient dies comatose or after syncopic attacks In most cases this fatal termination occurs in two to four months, and the extreme limits assigned by HANOT and GILBERT are five weeks and sixteen months

Unhappily, as THERESE[11] remarks, "when the diagnosis is established there is but one prognosis, and treatment so far has been palliative only"

CORRESPONDENCE

Medical Examiners' Fees

CHICAGO ILL Nov 12, 1895

To the Editor —I perused with much gratification the instructive paper entitled, 'Practical Life Insurance Examinations," by Dr John L Davis (JOURNAL, September 28), and more recently enjoyed the discussion upon this topic by Dr W W Vinnedge, of Lafayette, Ind, (JOURNAL October 12 and 26) and lastly, the views set forth in your editorial on this subject

One of the most important questions perhaps that arises in my mind is this, What are Dr Vinnedge, and all his confrères throughout the country going to do about it? Suppose the life insurance companies named (and others are likely to adopt the same course) have reduced the fee for medical examinations, shall they—these companies who have accumulated and own millions of dollars worth of assets and in hundreds and thousands of instances have relieved the distressed and unfortunate, be boycotted? Shall abler and more experienced physicians stand aside to make room for the younger members of our profession, that they may receive appointments as local medical examiners, medical directors, *et al?* Or shall we accept what is offered us by these wealthy life insurance companies—the reduced fee of $3, and be content?

The editorial in the JOURNAL of October 26 certainly has voiced the sentiment of the great majority of the profession, especially the members of the AMERICAN MEDICAL ASSOCIATION, on this important subject, and, so far as it goes, without having entered into minute details is sound But there is something else to be considered beside money making, in a careful physical examination of an applicant for life insurance, which I shall refer to before closing this letter

Regarding the reduced fee, as I understand it, this reduction was substantially agreed upon, at the meeting of medical directors of various life insurance companies held last May in New York after adjournment of the Baltimore meeting It was decided then to reduce the fees of the local medical examiners of some of the oldest and best known companies in the United States At the aforesaid meeting however, nothing was said as to these rich and powerful corporations reducing the amount of premiums for the policies they sell, nothing was said about pruning salaries or devising ways and means to reduce salaries of higher-priced officers, neither was there anything stated or done as to the said companies reducing their rate of interest when they loan money upon desirable "gilt edged" security Nor was there any discussion upon the matter of lessening rents to tenants of buildings owned by these magnificent corporations, for it was not the business of these gentlemen to discuss any of those material topics, nor is it known that retrenchment and economy in other departments were considered or advocated Solely the reduction of fees of their medical examiners was decided upon, etc

Apropos to this question perhaps your correspondent, Dr Vinnedge, and a few thousand other able practitioners have felt this indignity Physicians who for years perhaps, or during their time of appointment as medical examiners have extolled the advantages of 'their" life insurance company over *all* competitors, for which they received no emolument, are now obliged to accept reduced pay or resign In all sincerity, may I ask, is this fair *treatment on the part of* these immensely rich corporations?

But suppose the reduction does not stop at $3? I understand from the most reliable source that a certain life insurance company which is rated to be one of the largest and strongest companies financially doing business in our country, has gone farther and proposes hereafter to pay something like 83⅓ cents to their medical examiners for each examination made In Chicago the company mentioned has agreed to pay each of its medical examiners a salary of $1,000 per annum—and the company guarantees to give to each of its examiners 1,200 examinations during the year Or, rather the examiner is obligated by contract to do this amount of work if needs be for his company If the foregoing statement can be disproved, I should like to have some one knowing it to be otherwise, prove the contrary

Several life insurance companies doing business in Chicago have appointed as their medical director or chief medical referee, a specialist Again I may be pardoned for venturing to inquire, Is this fair and honest to the men who do general practice, particularly when our "specialist" friends —most of them, at least, announce and invite our attention to the fact that their practice is limited to the treatment of a special line of disease? Therefore to my mind, it does not seem quite consistent for an oculist, aurist, gynecologist dermatologist alienist, neurologist or an expert in mental or nervous diseases, or one whose practice is limited to diseases of the nose and throat or other special branches in medicine, to accept a position as medical director, medical referee or medical examiner of a life insurance company On the other hand, it might appear also that the sagacity of a company would induce it to select some other than a specialist for its chief medical adviser

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[9] Traité d Anat. Path I p 410

[10] Thérèse Union Méd 1895 No 34

[11] Loc cit

As to agents for life insurance companies, to whom reference has been made, these are varied in quality and kind My experience and acquaintance with them, is that as a rule they are a pleasant, agreeable and courteous class of gentlemen and sociable to the highest degree—gentlemen who command the respect of the community in which they reside

I take it for granted that all companies as a rule, try to secure medical gentlemen of professional skill and ability, men of sound judgment, and who are thoroughly versed in technique and are "broad gauge" in the theory and general practice of medicine

I would say in conclusion in replying to the first proposition of Dr Davis "that physicians do not give '*quid pro quo*' for the professional service they render life insurance companies" in my opinion a conscientious physician always endeavors to give 'value received' for his services, as he certainly should be a careful and skilled diagnostician It is probable, too in numerous instances that the examiner may have to call twice or even thrice upon the applicant at his residence or place of business, only to find him absent or otherwise engaged Then he has to return to his office to complete the report of his examination all of which requires valuable time and patience In such instances the examiner has well earned a $5 fee and frequently the general average of cases are not unlike the above hypothetical one

Very respectfully yours,

Liston H Montgomery, M D

70 State Street

The Protonuclein

Goshen, Ind, Nov 8 1895

To the Editor —I saw Dr Summer's able and interesting paper, printed in the Journal last June, on the subject of the nucleins And being interested in the study I concluded to make the inclosed imperfect notes of a case treated with the protonuclein

Oct 1 1895 I was called to see a child aged 2 years, son of Mr W living in the country The child had been sick one week under the care of other physicians On examination, I found the following symptoms of cerebro spinal meningitis, viz high fever irregular pulse, uneasy, with apparent pain, muscles of neck rigid, head drawn back could not be raised without lifting the body, eyes staring, complete paralysis of both legs Knowing full well the failures of all the old time treatments in so grave a case I determined on a new departure I ordered 2 grains of the powdered protonuclein to be given every three hours This course was continued for one week night and day The medicine was given at longer intervals for two weeks longer No other medicine was given during this time, except a small dose of calomel on the second day

The protonuclein had not been taken one day before the child began to show marked improvement in every bad symptom—except the paralysis It began to move the right leg five days after the beginning of treatment—the left leg a few days later It was brought to my office ten days ago, apparently in perfect health I consider this case and recovery more noteworthy, from the fact there were other cases of cerebro spinal meningitis in various parts of the county about the same time—all fatal so far as I have learned Not far distant, there were two or three fatal cases in one family

About six months ago, I was fortunate in getting a supply of protonuclein At first I was slow to rely upon it alone, to the exclusion of other medicines but my confidence has increased with my experience, and I now prescribe it in all proper cases, with the full assurance that I lose no valuable time in doing so I could report many cases of tonsillitis, diphtheria and la grippe in which the protonuclein treatment, both as curative and prophylactic, has acted like a charm

Respectfully, A C Jackson, M D

The Ohio Cases not Leprosy

New York, Nov 7, 1895

To the Editor —You published in the Journal, November 2, an article in which Dr McDougal asks, after describing two cases, "is this leprosy?" In my opinion they are not lepers I inclose you a letter I wrote to Dr McDougal

Dear Dr McDougal —Thanks for your information about the supposed leper cases, and for your article which you were kind enough to send me I have written my opinion to Dr Morrow, who had sent me the photograph of the cases I do not consider them lepers Colles law, I think, proves them to be syphilitic Certainly if they were lepers, the mother would have been infected too

Yours truly,

Albert S Ashmead, M D

Cases of Optic Nerve Atrophy of Obscure Origin

Atlanta, Ga, Nov 2, 1895

To the Editor —In two issues of the Journal, Dr Würdemann gave an account of the Ophthalmic Section at the last meeting of the American Medical Association In that account in giving the (above) committees as appointed, he gave my address as 56½ Whitehall Street The mistake has caused several of my letters to be missent Please make the correction and put my name,

C Dunbar Roy,
Grand Opera House, Atlanta

Department of Public Health

East Las Vegas, N M, Nov 5, 1895

To the Editor —Will you please inform me where I can get a copy of the bill drawn up by a committee of the American Medical Association for the establishment of a department of public health?

Yours very truly,

W M Smith, Sec'y N M Med Soc

Answer —Write the Chairman of the Committee Dr Jerome Cochran, State Health Officer, Montgomery, Ala

BOOK NOTICES

Twentieth Century Practice An International Encyclopedia of Modern Medical Science By Leading Authorities of Europe and America Edited by Thomas L Stedman, M D, New York city In Twenty Volumes Volume IV Diseases of the Vascular System and Thyroid Gland New York William Wood & Company 1895

The contributors to this volume are Drs Bertrand Dawson, of London, Murray of Newcastle on-Tyne, Sansom, of London and Whittaker, of Cincinnati

The volume opens with a scholarly article by Dr Whittaker, on Diseases of the Heart and Pericardium, which occupies half of the book It is a complete work on the subject Diseases of the Blood Vessels, by Arthur Ernest Sansom, of London, is next taken up and occupies eighty-three pages, Dr Bertrand Dawson contributes an instructive article on Diseases of the Lymphatic Vessels, and the book is concluded by Dr George R Murray, with an exhaustive article on Diseases of the Thyroid Gland, including myxedema, cretinism exophthalmic goitre, and goitre On these subjects no authority stands higher than Murray

The book is fully up to the high standard of its predecessors, and with one-fifth of the work already accomplished, it is entirely safe to say that the "Twentieth Century Practice" will be a faithful exponent of the existing state of the practice of medicine at the beginning of the new century

Manual of Gynecology By Henry T Byford, M D Containing 234 *illustrations, many of* which are original 8vo, cl pp 488, price $2 50 Philadelphia P Blakiston, Son & Co Chicago The W T Keener Co 1895

This book is intended as a reference book for students at college, and as well for the general practitioner

Not quite thirty years have elapsed since the "Clinical Notes on Uterine Surgery" by Marion Sims ushered into the world a distinct surgical specialty, and what a flood of gynecologic literature has since been produced! The mere enumeration of authors' names would unduly crowd this page

Trained by his father, the late Prof Wm H Byford, one of the pioneers in gynecologic surgery, and with educational advantages the elder Byford did not possess, we might reasonably expect a carefully prepared manual, giving clearly and definitely the present tenets and practice In this we are not disappointed, and we can cheerfully commend the book

A Practical Treatise on Materia Medica and Therapeutics, with Especial Reference to the Clinical Application of Drugs By John V Shoemaker, M D, LL D Third Edition, thoroughly revised Slip 8vo, pp 1108 Philadelphia The F A Davis Company London The F J Rebman Co 1895

In this edition, the author has revised the text to conform to the nomenclature of the U S Pharmacopœia of 1890 and has added much new material Among the newer articles we notice mention of tolysal, tolpyrin, salocoll, salacetol, chlorphenol, bromphenol, ethylenediamine silver phosphate, tropacocaine, formaldehyde and formalin, dulcin and tannigen The antitoxins and serumtherapy, and the use of animal extracts have received appropriate mention

The author has made a careful revision, and has compressed a vast amount of information in the book but he seems rather frequently to have kept his own opinion in the background, when giving at length the opinions of the multitudinous authorities cited We regret extremely that the revision has not extended to the dosage The obsolete British system, which has not only disappeared from the U S Pharmacopœia, but which will not again appear in the British Pharmacopœia itself, still disfigures the pages of this otherwise excellent work on materia medica Notwithstanding this serious defect the work will be found one of the most useful for reference, and altogether creditable to the author The observations on the more recent additions to the materia medica are conservative and judicious

As regards pharmacologic remedies the author by no means restricts himself to those which are official Numerous substances, both of vegetable and mineral origin, not yet recognized by the pharmacopœia are discussed Some of these will no doubt be made official hereafter, and it must be a pleasant reflection to the author that so many drugs, of which he was the first to recognize the value have already become official after demonstration of their usefulness

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NECROLOGY

Robert Battey, M D, of Rome Ga, November 8 He was born Nov 26, 1828, in Richmond Co, Ga, and was a son of Cephas Battey, a native of Peru, N Y His ancestors who were English, settled at Providence, R I He was educated at Augusta, Ga, and at Phillips' Academy Andover, Mass, and studied medicine at Booth's laboratory, Philadelphia, the Philadelphia College of Pharmacy, the University of Pennsylvania and Jefferson Medical College, graduating from the Philadelphia College of Pharmacy, March 17, 1856, and from Jefferson Medical College, March 7, 1857 He resided in Rome from December 1847, to the present time excepting the interval from November 1872, to October, 1875 during which he was temporarily at Atlanta, Ga, as professor of obstetrics in the Atlanta Medical College and editor of the *Atlanta Medical and Surgical Journal* He originated and successfully performed, in August, 1872, an operation for the removal of the ovaries, with a view to effect the change of life in women and thereby effectually remedy certain otherwise incurable maladies, an operation which has been many times repeated by himself and others He devised and used successfully in 1859 an improved apparatus for vesico vaginal fistula, and in 1872 he discovered that water introduced by the rectum, may be readily passed in the living body, the patient being etherized throughout the colon, the small intestines and stomach coming out at the mouth and he has repeatedly so passed it, as others after him have done, the entire practicability of doing it having been demonstrated upon the cadaver, at the Atlanta Medical College in December 1873, in the presence of the professor of anatomy and his class On June 3, 1869, he performed successfully the operation of perineal section (suggested by Prof Willard Parker, of New York), for chronic cystitis in a man of 62 In April, 1874, he successfully performed the new operation of vaginal ovariotomy, being the third instance of the operation In November, 1876, he removed from a man of 43 a fibro-cystic tumor of the carotid region, weighing four and a half pounds the patient making a good recovery in fourteen days He devised, in 1858, and has often practiced a new method of treating club foot by the use of carved wooden splints and roller bandage He was a member of the Georgia Medical Association, of which he was elected president in April, 1876, and of whose board of censors he had been chairman since April, 1873, the Atlanta Academy of Medicine, the American Gynecological Society, and American Medical Association, in which he was chosen a member of the Judicial Council in May, 1875, and secretary of the Obstetric Section at the same time as also in June, 1876 He contributed numerous essays and reports of cases to the various medical journals of the country In July, 1861, he was commissioned surgeon in the Confederate Army, serving as surgeon of the 19th Georgia Volunteers, as senior surgeon of Hampton's Brigade, as senior surgeon of Archer's Brigade, as surgeon-in charge of the Fair Grounds Hospital, number 2 at Atlanta, Ga, as surgeon in-charge of Polk Hospital at Rome, Atlanta, and Vineville, Ga, and at Lauderdale, Miss, and subsequently at Macon, Ga, until the close of the war

Joseph C Gilbert, M D, a prominent physician of large practice in Philadelphia died October 26, of apoplexy He was a native of this city and was born in 1832 He graduated from the old Pennsylvania Medical College in 1853 He served for three months as assistant surgeon in the 24th Regiment Pennsylvania Volunteers, and at his death was a member of Ellis Post No 6, G A R He was greatly interested in the development of his portion of the city and for six years represented the Twenty second ward in Councils

Joseph Daffron Schoales, M D, died in Philadelphia, October 24, of uremia He was born in Ireland Nov 27, 1837, and when 5 years of age the family immigrated to this country and settled in this city His father was the late Dr Marcus A Schoales Dr Joseph D Schoales was graduated by the Medical Department of the University of Pennsylvania in 1857 He served as surgeon to the Twelfth Pennsylvania Cavalry, until it was mustered out in 1865, except for a short period when he was detached for special service He was surgeon in chief at Harper's Ferry, under Colonel McReynolds and also under General Sigel when the latter made his raid through the Valley of the Shenandoah He was captured at Winchester, but after being prisoner of war for a month made his escape and returned to his regiment He was mustered out with the rank of Major and at once resumed practice in Philadelphia About thirteen years ago he was accidentally infected and afterward suffered with paralysis but continued in practice in spite of failing health until three years ago He was a member of the Philadelphia County Medical Society

Basil Norris, M D, U S Army, retired, at San Francisco, Cal, November 11, aged 67 Dr Norris who was retired with the rank of Colonel, was born in Montgomery Co, Maryland, March 9, 1828 He was graduated at the University of Maryland with the class of 1849 and entered the army as assistant surgeon in 1852 He served with the troops in Texas until 1857, in Utah until 1860 and in New Mexico until 1862 He was promoted surgeon in April, 1862, was appointed inspector of hospitals in October 1862, and Medical Director of the left grand division of the Army of the Potomac in February, 1863 and subsequently attending surgeon at Washington He was brevetted Lieutenant Colonel for faithful and meritorious service during the war and subsequently promoted to the rank of Lieutenant Colonel and Colonel When retired he was Medical Director of the Military Division of the Pacific His writings were numerous and scholarly He was a genial companion an accomplished officer and a faithful friend Few men connected with the public service had a wider circle of friends and acquaintance

PUBLIC HEALTH

The State Board of Health of Michigan has published an abstract of a commendatory notice of their course in regard to popularizing hygienic knowledge and inculcating sanitary precepts with a view to the extinction of zymotic diseases by means of pamphlets etc which appeared in the *Journal d'Hygiène* Paris, France, October 10

Michigan State Board of Health —The circular of the Michigan State Board of Health on the prevention of typhoid fever has been issued The pamphlet contains the following mortality source of infection mode of communication, the protection of the water supply, period of incubation, the duties of householders and physicians, duties of local board of health and health officer precautions, disinfection of the bowel discharges of the sick, disinfection of urine, clothing, towels etc , bodies of the dead, disinfection of rooms, privies, etc

Diphtheria at Newark, N J —By reason of the great prevalence of this disease at Newark, the common council has after much contention granted to the Board of Health the sum of $2500 The City Hospital also receives an additional grant of $1000 to tide that institution over the present crisis A protracted and bitter dispute has taken place between the mayor of the city and the health authorities over the expenditures of the latter Some physicians assert that the disease can be traced to the promiscuous use of drinking cups in public schools, and contend that the school board should cooperate with the health board to abolish this practice There were reported in Newark in October 183 cases of diphtheria, 84 more than in September

Contagious Disease Hospitals Compared to the Fire Departments of Cities —Dr William Smith, President of the recent Sanitary Congress at Hull, England, in his address took occasion to congratulate that city upon the establishment there of an admirable infectious disease hospital, the provision for smallpox patients and the ship for the isolation of cases of cholera It might occur to some of the ratepayers of Hull that if these hospitals were not used, there was something of a reason for abolishing the cholera and smallpox hospitals or at least making some other arrangement by which the expenses attendant on their maintenance were to be somewhat abated He hoped that if any such idea existed in the minds of any, that they would once for all get rid of it They really must look upon them as a provision made, as it were, in times of peace for war and for the trouble which might come upon them at any moment The provision of those hospitals was as necessary as fire stations It would be almost as reasonable to expect to organize a fire department anew, in the face of each new conflagration in our cities, as to be in the attitude of some communities that put off the organization of their hospital for infectious diseases "until the actual demand" for them

Etiology of Epidemic Cerebro-Spinal Meningitis —In 1887 Weichselbaum described a parasitic microorganism which he claimed was pathogenic for cerebro-spinal meningitis and which from its habitat he called *diplococcus meningitidis intra cellularis* His observations which were confirmed by Goldschmidt, Marchiafava, Celli and other bacteriologists, have been energetically discussed since, both in France and Italy A number of authors, and among them Bordoni-Uffreduzzi, claim the microorganism described by Weichselbaum is nothing but a variety of the pneumococcus In order to settle this question Jaeger,[1] during a small epidemic of this disease in Stuttgart, made some anatomic and bacteriologic researches He separates the Weichselbaum diplococcus from the Frankel coccus, through morphologic characters The former does not have the elongated lanceolate form of the pneumococcus, it is more rounded, and when joined to another, looks something like the sole of a shoe The capsule surrounding it is much less developed, and very often is difficult to recognize In pure cultures the diplococcus of Weichselbaum, like the pneumococcus, often takes the form of small chains, but very often also it is grouped in tetrads which are never seen in Fränkel's coccus, it is more of a tetracoccus than a diplococcus These differences extend to their biologic characteristics also, the intracellular coccus is much more resistant It is never pathogenic in subcutaneous injections, it must be introduced into the serous cavities as the pleura or peritoneum in order to cause morbid phenomena Jaeger looks upon the intracellular coccus as the true pathogenic agent of epidemic cerebrospinal meningitis The pneumococcus plays a much less marked role, to be sure it is found in some cases but we find streptococci and other microbic agents in them also These cases are nearly always isolated sporadic ones It is fair to suppose that in the cases of epidemic meningitis where the pneumococcus is found, we have to do with examples of mixed infection The mode of transmission of this epidemic form of meningitis is still but little known[2] However, the presence of the intracellular coccus in the nasal secretions, and its persistent virulence in the dried mucus throw some light on the propagation of the disease The pathogenic microbe is disseminated by the nasal secretions soiling the linen and clothes of the patient, or by the sputum, and thus produces the almost murderous epidemics

A Berlin Oekonomierath's Dairy —The *Public Health* (London) reports the persistent agitation of the pure milk question that is going on in official and private circles in London From a recent report of the Royal Commission appointed to inquire into the effect of food derived from tuberculous animals on the health of human beings, many lessons are to be learned regarding the nicety and scientific precautions that obtain in some of the German and Danish dairies In one or more of the German dairies the milk is filtered through three layers of fine gravel, and it is impossible for the inexperienced person to realize how much dirt is collected by this process A condensed statement taken from the Report of the Royal Commission, concerning one of the leading Berlin establishments is as follows

The *Milch Kur-anstalt* of Herr Oekonomierath Grub, situated at the Victoria Park, in the southwest of Berlin, is designed solely to provide milk of the first quality for children and invalids No cream, butter, or cheese is made Stalls for 250 cows are provided, they are lofty and well-ventilated, the floor is made of cement, and the walls, to a height of eight feet, are covered with white glazed porcelain tiles Dried peat serves to absorb the excreta, and prevents any unpleasant smell Only such animals as come from the healthiest breeds (chiefly the Swiss) are bought, and, as a rule, they are not kept for more than one year No animal is accepted without the district veterinary surgeon's certificate as to its healthy condition, and before its milk is utilized, it is placed in an observation stall for some days, under the control of the company's own veterinary surgeon, who regularly examines all animals in the institution As food stuffs, only hay from the Jura Alps and wheat meal are allowed Brewers' grain, various oil cakes, and even grass are excluded Before milking, the udder is carefully washed, and the milk is received into pails made out of one piece of metal with no sharp angles Great stress is laid on the importance of removing as quickly as possible from the cow shed the milk that is drawn, and therefore, as soon as five or six pails are full they are removed, and the milk is cooled down by a Laurence cooler The liter bottles, previously having been cleaned by washing in a soda solution and brushing (the latter operation being materially assisted by introducing a little sand), are then filled, stoppered by a patent porcelain cap, stamped with a leaden stamp, and dispatched to the city twice daily A large business is also done in the preparation of sterilized milk, for which the arrangements are exceedingly good The sterilizer is capable of holding 600 bottles at a time, and these, when filled, are placed with the porcelain cap, with its india-rubber col lar loosely fixed, in the apparatus The temperature in the interior is maintained for an hour to an hour and a half at between 90 and 100 degrees Cent This *Milch Kur anstalt* no doubt owes much of the success it has attained to the way in which it is supported by the medical profession, some of the best known members of which have allowed their names to appear as references "

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[1] Zeits f Hyg u Infect, XIX, 2

[2] La Sem Medicale, 1895 No 48

Sanitation in India —The following rules for combating epidemics of cholera in municipalities of the Madras Presidency were recently framed by a committee consisting of the Honorable C S Crole, Surgeon Major-General C Sibthorpe and Surgeon Lieutenant-Colonel W G King, appointed by the Government of Madras These rules are not intended for introduction into Madras city, and will for the present apply only to the twenty-four mufassal municipal towns It is the object of these rules to insure 1, that the earliest possible information of every attack of cholera should be conveyed to the authorities, so that the cholera microbes may be at once prevented from being conveyed into situations in which they might spread the infection , 2, that the microbes should be at once completely destroyed , and 3, that medical assistance may be provided for those who, in spite of precautions, are attacked by the disease They accordingly follow these three divisions Municipal councils shall be responsible for the general carrying out of this scheme and district medical and sanitary officers for the detailed working of the rules The latter shall make their own arrangements both in their headquarters and elsewhere in the district, except in municipalities where there are civil surgeons In these, civil surgeons shall be responsible For the purpose of these rules, every municipality to which they apply shall be divided into "circles" comprising from 2,000 to 3,000 houses containing from 7,500 to 10 000 inhabitants These circles should, as far as possible, follow ward divisions or other local limits so that they may be readily comprehended Three circles shall form a 'division " Chairmen will at once map out their towns into 'circles" and 'divisions," and after approval by the collector, record the maps in their offices, and send a copy to the senior medical officer of the municipality For each division of 22,500 to 30,000 inhabitants, the chairman shall at once procure and retain in the municipal stores the following apparatus and disinfectants

	Rs	a	p
12 portable tin canisters for disinfectants at Rs 1–8	18	0	0
9 lb perchlorid of mercury at 3 annas an oz	27	0	0
9 lb commercial hydrochloric acid at 2 annas per oz	18	0	0
60 lb carbolic acid at 4 annas per lb	15	0	0
600 lb of sawdust and 600 lb of unslaked lime at 1¾ pies per lb	8	5	4
Total	86	5	4

He will be responsible that these stores are always maintained and in good condition Should it appear to the collector of the district that cholera imminently threatens to attack any municipality to which these rules apply, he shall warn the chairman of the council and the district medical and sanitary officer and the senior medical officer of the town accordingly Upon receipt of such warning the chairman shall immediately appoint in each circle of the town an observation staff consisting of

	Rs	
One inspector on	15	per mensem
One peon on	8	
One toty on a maximum of	7	

and in each division a divisional inspector on Rs 35+15 jutka or horse allowance with an orderly on Rs 8 The orderly should be allowed a jutka or pony to enable him to carry without delay such orders to circle inspectors as may be given The chairman shall without delay report to the collector the date on which these appointments were made This staff should be drawn from the existing sanitary establishment of the municipality, as their local knowledge will be valuable, and the vacancies so caused should be filled by temporary hands who should be paid at the rates sanctioned for that establishment It will be the duty of the members of the observation staff to constantly and systematically patrol the whole of their circle in order to gain intelligence of the first case of cholera or severe diarrhea in it so that immediate action may be taken At such times cases of severe diarrhea should be regarded as equally dangerous with cholera The members of the observation staff should also be employed in removing with the aid of the ordinary conservancy establishment, all defects in sanitation which would favor the multiplication of the cholera microbe, such as decaying rubbish or stagnant sewage, and should report their action to the chairman They should further warn the inhabitants of the circle to adopt the precautions against cholera prescribed in the extract from Surgeon Lieutenant Colonel King's "Simple Sanitary Rules" which is printed as an appendix to these rules, and should distribute copies of this, which the chairman will keep ready printed in the vernacular, gratis, and as widely as possible The chairman and councilors and municipal servants of all ranks should assist the observation staff in every way possible, and the police in every way compatible with their other duties, both in getting information of the first attack and in removing sanitary defects in the circle

On receipt of information under the above system of the first attack of cholera, the chairman shall at once employ in the circle in which it has occurred (but not in other circles) the following additional staff three peons on Rs 8 each three toties on a maximum of Rs 7 each and shall report to the collector and the district medical and sanitary officer the date on which he did so This staff, like the observation staff, shall be selected from the ordinary existing municipal establishment, the vacancies so caused being filled by temporary men on the sanctioned rates, and it shall be combined *with the observation staff of the circle so that the whole may thenceforth form ' a preventive staff " to carry out the duties set forth below* The preventive staff shall visit every house in which cholera has occurred and shall use the greatest care in seeing that all choleraic vomit and excreta are at once collected in separate vessels, mixed with carbolic sawdust,[1] paddy husk or other combustible matter, and where necessary with kerosene oil, and thoroughly, completely and immediately burnt on or near the premises The burning shall *invariably be carried out in the sanitary inspector's presence and he shall be responsible that it is thoroughly done* The chairman shall delegate to the senior medical officer of the town his powers under section 231 (i) of Act iv of 1884 of entering and inspecting houses Rags, clothes and bedding stained with vomit or excreta should similarly be burnt upon the spot under the same precautions, the danger of keeping such articles being fully explained to the owners and full compensation in money or kind being offered in the case of the very poor Floors and furniture stained with the vomit or excreta should be disinfected by being thoroughly sprinkled with a solution of perchlorid of mercury made up as shown in the note[2] The burning of tar and sulphur in houses and streets should be discontinued as it is inefficient as a disinfectant, but street drains outside the houses attacked should be flushed with the given solution[3] The greatest courtesy and consideration should be used by the preventive staff to all classes in carrying out these instructions, as the exercise of extreme tact is essential to the success of the scheme After a patient has recovered, the house and especially the room which he occupied during the attack, should be thoroughly disinfected The floors should be dug up wherever stained with choleraic matter and the earth burnt The floor and the house drains and the furniture should also be liberally sprinkled with the solution above described[4] The chairman shall provide the medical officers responsible for working the rules with a permanent advance of Rs 50 per division, which shall be recouped from time to time by bills supported by vouchers where possible The preventive staff shall continue to be maintained in an affected circle for ten days after the last attack of cholera in it and the observation staff in all circles for twenty-one days after the last attack in the town During this time they should be employed in remedying sanitary defects There shall be a headquarters in each division at which a medical subordinate shall reside who shall be supplied with medicines, and medical comforts from the municipal hospital for the treatment of those attacked and who shall be available for attendance gratis on the sick in their own houses This shall also be the headquarters of the division inspector and of the preventive staff on night duty In one place at least in each town there shall be isolation huts with separate accommodation for males and females for the treatment of those who desire it or who are brought there These shall be in charge of a medical subordinate with the necessary staff and supplied with equipment medicines and medical comforts This subordinate shall be deputed to no other duty He shall reside with his staff on the spot and shall be adequately paid No charge for medical treatment under these rules shall be made [illegible] the treatment in the huts or under Grant Hospitals and Dispensaries The headquarters of the division and the sites for the isolation hospitals shall be at once selected and shall be marked on the maps referred to above In order to make provision for meeting the charges under those portions of these schemes relating to observation and prevention the council of every municipality to which these rules apply shall be required to allot in every budget under the head of charges a sum which shall be in the proper [illegible] of Rs [illegible] for every [illegible] inhabitants in the municipality This shall be called the cholera reserve and shall not be spent upon any object but the carrying out of this scheme [illegible] The provision of this reserve should not be allowed to disturb the existing percentages to the total income [illegible] of the expenditure upon communications, education, [illegible], etc, or to swell the total of the [illegible] for sanitary purposes under Grants [illegible] and [illegible] but should be set aside from funds which [illegible] annually expended upon permanent (as distinguished from temporary) sanitary needs Municipal [illegible] are hereby authorized to employ establishments on these lines [illegible] laid down as the necessity for them arises, and to defray the charges from the cholera reserve in anticipation of the sanction of Government but this sanction should be obtained without delay On the final withdrawal of the special staff the medical officer responsible for working the rules shall within seven days forward a report on the epidemic and the operation of the rules through the chairman of the municipality to the collector for the orders of Government In cases where the medical officer in question is subordinate to the district medical and sanitary officer or the civil surgeon, such report shall be forwarded through those officers In every case such communications shall be submitted to Government through the sanitary commissioner —*The Indian Medico-Chirurgical Review*, September 1895

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[1] One part of carbolic acid to ten parts of sawdust

[2] ½ oz perchlorid of mercury
1 oz hydrochloric acid
Three gallons (one small chatty full) of water with a pinch of red ink powder to color it to prevent accidents

[3] Wooden buckets or earthen pots should alone be used for carrying about this solution as it destroys metal vessels and the packets of the solid perchlorid should be labelled Poison in English and the vernacular and only intrusted to the inspectors themselves

[4] It is most desirable that the excreta of a patient for [illegible] days after he has recovered from an attack should be carefully collected and carried away They still contain cholera microbes For this purpose a Dindigul bullock lorry costing Rs [illegible] and air-tight iron excreta drums costing Rs [illegible] each may be provided The purchase of these will however be left to the option of councils

The Chicago Drainage Canal —Final Report of Sanitary Inspector —At the meeting of the Board of Trustees of the Sanitary District of Chicago, the clerk presented a report from Dr William Martin Sanitary Inspector, with reference to sanitary conditions along the main channel, and tendering his resignation of his office and the report was read and referred to the Committee on Public Health and Order The following is the communication

CHICAGO, Oct 29, 1895

To the Honorable the Board of Trustees of the Sanitary District of Chicago

Gentlemen —In making this, which I intend shall be my last report, I shall take occasion to review the work done in this department, and state the conditions existing at the time of assuming charge, which necessitated the appointment of a Sanitary Inspector

Soon after the inauguration of the work in the fall and winter of 1892, it was discovered that a great deal of sickness was prevalent in the various quarters along the channel where the men were housed and fed This arose entirely from the wretched sanitary conditions surrounding these places, and was of such a threatening character as to call for prompt action on the part of the Trustees in order to guard against epidemics which were liable to occur at any moment unless a radical improvement was secured in this respect Numbers of these places were located in low swampy spots, abounding in malaria, with no facilities whatever for proper drainage The bunk houses were poorly constructed and very much overcrowded The water was very impure and no adequate provision was made for the proper disposition of camp sewage As a natural sequence sickness was quite prevalent, and as there was no organized system for the medical care of the laborers, they were in a most wretched condition, were they so unfortunate as to fall ill After my first thorough inspection of the entire line and the submission of my report, the recommendations therein made were promptly acted upon and a number of sanitary regulations adopted, designed to correct the evils to which I had called attention Cards on which these rules were printed were ordered to be posted in all of the quarters and instructions sent to each contractor that these regulations must be rigidly enforced Having discovered that there was no law in Illinois bearing on the subject of overcrowding in lodging houses, this Board was instrumental in having the State Board of Health pass a resolution in which was clearly defined the minimum air space that each lodger is entitled to, this being the first time in the history of the State that any such regulation was enacted No provision having been made for the care of the sick and injured among the employes on the work, a plan had to be devised that would meet this requirement This was done by an assessment of 2 cents a day on each man for hospital fees for which sum a number of physicians living along the line contracted to take care of them in hospitals owned by themselves or in the hospitals of Chicago and Joliet with the authorities of which they had arranged for such treatment Suitable means of conveyance being employed to transport patients to these various hospitals this plan has seemed to work well and has secured good medical and surgical attention at a very trifling cost to the laborers By strictly enforcing the regulations in regard to the supply of wholesome water, a proper disposition of camp sewage, overcrowding of bunk-houses, and an abundant supply of substantial well cooked food, we have been successful in keeping the camps free from epidemics of disease, which is always a danger to be apprehended where large bodies of men are being cared for on great works of this character As proof of our success, I would cite the fact that during the prevalence of smallpox, which prevailed in Chicago during the year 1893 and 1894 there occurred on the drainage channel a total of sixteen cases only This, when we consider the fact that the majority of the laborers who came from the city were accustomed to live in the cheap lodging houses, which were regular hotbeds of contagion, was a very flattering result, and was only achieved by the most thorough systematic vaccination of all the workmen on the line, compelling them to submit to it or seek employment elsewhere Numerous analyses have been made of the drinking water furnished the men, in order to insure the purity of what is usually one of the most prolific causes of disease Where such impurities have been detected, prompt measures have been adopted to correct such evils which have resulted in warding off danger from this source The work of inspection has been materially aided by the police force of the Sanitary District, who are under orders to report any negligence on the part of the contractors pertaining to sanitary matters That they do the work well is attested by numerous reports made to me, which are on file in my office A great deal of misapprehension seems to exist in the community at large in regard to the powers of the Board of Trustees, as it relates to the control of all matters pertaining to health and public order as applied to the laborers on the canal It is generally believed that their power is absolute, when the facts are that it is very limited The law gives them the power of controlling the various camps in regard to keeping them in a proper sanitary condition, but they have no control whatever as regards the care of the sick and injured men, which is a matter resting entirely with the contractor who employs them Some undeserved criticism has been made of this Board as well as myself, in connection with this subject, probably through misapprehension on the part of the critics, and not with any design of placing this Board in a false position for I think it can be truthfully said that in all matters pertaining to the health, physical and moral well-being of the laborers employed on the channel, the Trustees have ever been thoroughly impressed with their duties and active in the discharge of them In a work so extensive as this, ideal conditions can not be maintained in all things, but taken collectively, there is a higher average of conditions favorable to the laborer than was ever known on any public work of corresponding magnitude I had occasion during year of the World's Fair to meet travelers from various parts of the world who had seen the other great canals during their period of construction, and they all united in the opinion that our men were better fed, better housed, and in every respect better cared for than anything they had witnessed on the Suez the Panama, German and Manchester Canals, or on any of our own great railroads

(Signed) WILLIAM MARTIN, M D,
Sanitary Inspector

Health Reports —The following health reports have been received by the Supervising Surgeon General, Marine-Hospital Service

SMALLPOX—UNITED STATES

Arkansas Mississippi Co , November 6, 43 cases, 2 deaths
Louisiana New Orleans, October 5 to November 2, 7 deaths
Michigan Smallpox reported present at Detroit, Hamtramck Twp , Rochester

SMALLPOX—FOREIGN

Antwerp October 15 to 22 2 deaths
Cairo October 8 to 14, 1 death
Dublin October 19 to 26, 4 cases, 1 death
London October 19 to 26 1 death
Moscow October 5 to 12, 1 case, 1 death
Nogales November 2, 1 case
Odessa October 12 to 19, 3 cases, 1 death
St Petersburg October 1 to 19, 13 cases, 5 deaths
Prague October 5 to 19, 5 cases
Rio de Janeiro October 5 to 12, 3 deaths
Rotterdam October 19 to 26, 1 death
Santos October 5 to 12, 1 death
Southampton October 19 to 26, 1 case
Teneriffe September 21 to October 5, 2 cases, 1 death
Trieste October 18 to 25, 1 case
Tuxpan October 19 to 26, 3 cases,
Zurich October 12 to 19, 1 case

YELLOW FEVER

San Juan de Puerto Rico October 5 to 12, 10 cases, 1 death
Rio de Janeiro October 5 to 12, 3 deaths
San Salvador, November 1, yellow fever reyorted

CHOLERA

Bombay October 1 to 8, 2 deaths
Osaka and Hiogo October 5 to 12, 7 cases, 7 deaths
Japan total cholera statistics from date of outbreak to Oct 10, 1895 cases 52,218, deaths, 36,075 During the week October 3 to 10 1,279
Cases of cholera occurred on Japanese army transports occupied in the movement of troops from and in Formosa

MISCELLANY

Association of Assistant Physicians of Hospitals for the Insane.—The second meeting of the Association of Assistant Physicians of Hospitals for the Insane was held at the Michigan Asylum for the Insane, Kalamazoo, Mich , Oct 24, 1895 The membership originally composed of medical officers of the staffs of asylums of Michigan, Illinois and Iowa, was extended to include the assistant superintendents and assistant physicians of all asylums The next meeting will be held at the asylum at Independence, Iowa, during May, 1896

Mr Edison's Definition of Electricity —A New Jersey paper quotes " the wizard" Edison as offering the following definition " Electricity is a mysterious fluid about which nothing is known " Certainly, if any one could tell what electricity is, Mr Edison would seem to be the man He frankly acknowledges entire ignorance of it He knows undoubtedly a multitude of ways in which it manifests itself, and he has been marvelously successful in utilizing those manifestations But of the force itself he knows nothing

Horseless Vehicles for the Country Physician —The *Popular Science News* has the following note regarding a new form of horseless carriage

' Self propelling carriages are being introduced from France where they make a speed of eight to fifteen miles an hour on the level The motive power is a gasoline engine, which occupies little space and carries sufficient petroleum spirit to last for a run of fifty miles, other kinds use electricity etc There are hundreds of these carriages in France Country doctors find them useful, and as the engines are noiseless horses are not frightened by them "

But France has well drained, macadamized roads Deep mud, such as we encounter in our country roads, is too much of a hindrance to the operation of the vehicle

Massage an Occupation for the Blind —From *Popular Science News* ' It is stated that in Japan, massage is practiced almost exclusively by blind persons The idea is that the sense of touch is so much more delicate and developed in those who have lost their vision, that the employment of them as masseurs and masseuses is quite in accord with the natural fitness of things Blind persons are largely used for this purpose in St Petersburg and at a massage school there the professor is also blind Doubtless, were our massage establishments officered by blind male and female persons the suspicion raised against them that they were used for improper purposes would soon be removed "

Tubercular Disease of the Portio Vaginalis —In the *British Medical Journal*, Dr J D Williams has reported two cases of the above named affection In the first of these cases, the patient was 63 years of age and the subject of phthisis from which she died a few weeks after being brought to the hospital The genital organs, removed at the autopsy, showed a tuberculous affection of the cervix involving a portion of the adjacent vagina There was no tubercular disease of the body of the uterus nor of the appendages The second case was that of a patient 36 years of age She showed some disease of both apices On the cervix an irregular ulcer was to be seen, which, on microscopic examination, proved to be of a tuberculous nature The cases are of interest from the location of the lesion The cases bear out the observation made by others, that in cervical tuberculosis the body of the uterus and the appendages usually remain free of disease

Practice of Veterinary Science made Amenable to Law in North Dakota —An act has been passed in North Dakota regulating the practice of veterinary medicine, surgery or dentistry in that State It provides for the appointment of a board of examiners, the issuance of certificates, and makes it a misdemeanor punishable by a fine of not less than fifty dollars nor more than one hundred dollars, to practice in violation of this law But an exception is made where gratuitous services are rendered in cases of emergency, dehorning of cattle, and castration of animals All persons beginning the practice of veterinary medicine, surgery or dentistry in the State, after the passage and approval of this act, must be graduates of a legally authorized veterinary school, college or university, and they shall subject themselves to such examination as the board may require Any person complying with the provisions of this act shall be entitled to expert fees as a witness in all cases relating to the veterinary profession in any court of law or equity

A Case of Umbilico Vesical Hernia —According to *La Semaine Medicale*, August 21, Dr Lannelongue reported to the Congress of Gynecology, Obstetrics and Pediatrics recently held at Bordeaux, the following interesting case some years ago a woman brought to him a male infant, aged three months, which passed water, both through an umbilical appendix resembling a penis, and by the natural organ, which was in its proper place The jet which came from the umbilical canal described a curve more than 30 centimeters in diameter On examination, it was found that the apparent abnormal pelvis was an umbilical hernia caused by the persistence of the urachus A urinary fistula had been produced on the separation of the umbilical cord The child subsequently died and the author had an opportunity to make a necropsy The bladder was injected and it was then seen that the viscus was prolonged by a channel as large as the forefinger, namely the urachus, up to the umbilicus The channel extended into the external appendix where it opened by an oblique orifice resembling the meatus urinarius The contractions of the bladder in micturition caused a stream in both directions, umbilical and urethral hence the double jet of urine seen from time to time this however, was exceptional as the musculo-elastic ring of the umbilicus fulfilled the function of a sphincter and prevented the escape of urine through that orifice The author suggests that this case once more shows the necessity of tying the umbilical cord only after having satisfied oneself that there is no hernia at the proximal end

Burns Treated by Strong Carbolic Acid Dr Benjamin H Brodnax of Brodnax, Louisiana, writes to the *Popular Science News* as to above bold line of treatment of burns and scalds "Take pure undiluted carbolic acid, with a feather or fine brush paint the burned or scalded surface, extending a little over the edge where the wounded surface is not bare Pain instantly ceases and if care is taken no further dressing is required but a light tissue of lint cotton and one roll of bandage will insure from contusions etc" Dr O H Allis who read the original article, sent him by myself before the Philadelphia County Medical Society March 10 1891 remarked To my mind it is one of the boldest ventures in all surgery To think of applying to a raw and agonizing burn that which would scald a healthy cutaneous surface would seem to the unreflective mind a reckless and cruel act But when we consider that a raw burned surface is painful from its exposed nerve filaments and that the strong acid combining with the albumin of the tissues forms a coating that excludes the air while at the same time it benumbs—paralyzes—each terminal exposed filament, the remedy seems to be the result of a happy inspiration"

Fifteen Thousand Pasteurian Treatments—The Record of Nine Years—The last annual report of the Pasteur Institute embraces the ninth year of its operations, and shows in that time the grand total of 15,217 persons treated The mortality, excepting those cases that were considered to be in a hopeless state at the time of reception, was eighty one deaths, or a mortality rate of a little over one half of 1 per cent The lowest the rate of mortality has touched in any one year was a little more than 2 per 1000 and the rate has shown a marked decline in recent years compared with the years immediately following the establishment of the Institute Whatever may be our hesitancy—natural or acquired—regarding institutional statistics the following may be taken as conclusive testimony of one of the greatest conquests over disease that has yet been made In 1886, number of persons treated 2,671 deaths 25, rate of mortality per cent 0 94 In 1887 number of persons treated, 1,170, deaths 14, rate of mortality per cent 0 79 In 1888, number of persons treated, 1,622, deaths, 9, rate of mortality per cent, 0 55 In 1889 number of persons treated, 1,830 deaths, 7, rate of mortality per cent 0 38 In 1890 number of persons treated, 1,540, deaths 5, rate of mortality per cent 0 32 In 1891, number of persons treated 1,559, deaths, 4, rate of mortality per cent, 0 25 In 1892 number of persons treated, 1,790, deaths 4, rate of mortality per cent, 0 22 In 1893 number of persons treated, 1,648, deaths, 6, rate of mortality per cent 0 36 In 1894, number of persons treated, 1 387, deaths, 7, rate of mortality per cent, 0 50

Statistical and Sanitary Notes from the Military Department of the Platte—Colonel Dallas Bache, assistant surgeon general U S Army, states in a recent circular that it is his intention, as medical director of the Department, to issue for each month a statistical and sanitary note "for the purpose of distributing a class of information which is of equal interest to himself and the medical officers of posts It is not intended to institute close comparisons between local statistics, into which different factors must enter, but to associate all the medical officers in the Department in matters of general concern, and to supply them at short intervals with intelligence which is now a subject of annual report" The form used by Colonel Bache gives the name of each post, its mean strength, the admissions for disease and for injury, the number inefficient daily, the deaths and discharges, and the admissions and constant sickness as percentages of the strength Under date Oct 30, 1895, Nos 1, 2 and 3 of these "Notes," for July, August and September respectively, have been published Fort Omaha, Nebraska, has the highest admission rate for each of the months, 17 83 per cent of its strength in July, 13 89 in August and 16 24 in September Fort Meade, South Dakota, has, on the whole the best record, its admission rate for disease in July having been only 4 59 per cent of its strength, in August 4 74 and in September 3 75 Nothing of separate sanitary interest was reported during the first two months, but on the September report it is noted that up to the end of the month no case of typhoid fever had been reported in the Department A large part of the command was in the field on practice marches and at target ranges During their field service the health of the troops was excellent

The Army Medical School—The second session of this school will begin Monday, Nov 18, 1895, Colonel C H Alden, president of the faculty, delivering the opening address The regular course will consist as heretofore of lectures on the duties of Army medical officers in peace and war, on military surgery, military medicine, and military hygiene with practical laboratory work in bacteriology and sanitary chemistry, hospital corps drill and first aid, horsemanship and the details of military inspections, parades and other ceremonies Some changes have been made in the faculty recently on account of the retirement from active duty, at his own request after thirty years of service, of Lieut-Colonel John S Billings, who held the professorship of military hygiene, and of the assignment to other duty of Captain J M Cabell, who was assistant to the professor of military surgery and instructor in hospital corps drill and company administration Colonel C H Alden, assistant surgeon-general, will continue to instruct the young officers in the duties of Army medical officers Lieut-Colonel W H Forwood, deputy surgeon general, professor of military surgery, is understood to have made arrangements for practical work on the cadaver, a feature which was not embodied in the program of the first session of the Army Medical School As the Examining Board had every facility for ascertaining the qualifications of the candidates accepted by it, the addition of this to the curriculum evidently means that it was not satisfied with the surgical skill displayed by the last graduates who came before it Lieut-Colonel D L Huntington, deputy surgeon-general, has been appointed professor of military medicine, relieving Major Charles Smart, surgeon, who succeeds Lieut-Colonel Billings in the chair of military hygiene and continues to hold position as director of the chemic laboratory Major Walter Reed, surgeon, has been announced as professor of clinical and sanitary microscopy and director of the pathologic laboratory, and Captain F R Keefer, in command of the hospital corps company at Washington Barracks, D C, has been appointed assistant to the professor of surgery and instructor in hospital corps drill The day's work of the student begins, except on Saturdays, with medico military drill, the forenoon, according to the program, is to be spent over pathologic and bacteriologic microscopy; the afternoon in the work of the sanitary chemist with a lecture from 3 to 4 P M Arrangements have been made for special lecture courses by Major Geo B Davis, judge advocate, U S A, on military law, by Dr Godding, superintendent of the St Elizabeth Hospital, D C, on insanity, by Professor C W Stiles, Department of Agriculture, on the parasites of the human system, and by Dr Robert Fletcher on the present condition of the Army Medical Museum and Library and the methods of literary research The program requires the class to report on Saturdays to the Commanding Officer of the cavalry post of Fort Myer, Virginia, who will place its members under the care of a competent instructor in the riding hall The lecture hour on alternate Fridays will be given up to the meetings of the Journal Club, which was organized in 1893 with a view to giving the young men opportunities of speaking in public and familiarizing them with the methods of medical societies The following is a copy of the by-laws of the Club, adopted during the first session of the Army Medical School

1 The name of this Association shall be the Army Medical Journal Club

2 It shall be composed of the Medical Officers of the Army on duty in Washington or its vicinity, and of such other physicians as may be invited by the Surgeon General of the Army, or by the President of the Club, to take part in its proceedings

3 The objects of the Club are the mutual benefit and instruction of its members, by the reading of brief abstracts of important articles in medical journals, the examination of new books, apparatus specimens, etc, acquired for the Army Medical Library, Museum and School, and such other methods as may, from time to time, be determined on

4 The officers of this Club shall be a President and a Secretary, to be elected at the first meeting in November of each year

5 The meetings of this Club shall be held in the lecture room of the Army Medical School, on alternate Fridays, from October 1 to May 1, beginning at 4 P M

6 The members of the Club shall be called upon in alpha-

betical order of their names, for summaries of journal articles, it being understood that no one shall occupy more than fifteen minutes and that the total length of the meeting shall not exceed one hour and a half It is supposed that from six to eight persons will be called on for journal abstracts at each meeting

The first meeting of the Army Medical Journal Club for the season of 1895 96, will be held at the lecture room of the Army Medical School cor 7th and B Streets, s w , on Friday, November 22, at 3 P M

Hospital Notes

The contract for the erection of the new Moline, Ill , public hospital has been awarded The total cost of this institution will be $20,000 ——By the will of Captain Lang, who with his wife was murdered in Gardenville, Md , November 4, his estate, valued at $200,000, is left to the St Joseph Hospital at Baltimore ——The Chicago Hospital was formally opened November 9 ——The regular annual meeting of the Waukegan, Ill , Hospital Association was held October 21 ——The annual report of the Maine General Hospital at Portland, shows that 1,061 patients were treated during the year

Washington Notes

Health of the District —The report of the Health Officer for the week ended November 2 is as follows the number of deaths reported at the health department during last week was 116 In the previous week they numbered 118 The relative conditions in regard to general health were quite similar during the two weeks, the exceptions being diseases of the brain and typhoid fever The mortality from brain maladies rose from 10 to 19, and that from typhoid 10 to 17 One death each from diphtheria and smallpox occurred Otherwise no deaths from any of the contagious diseases were reported The infant mortality declined from 39 to 22, while the total death rate declined from 22 27 to 21 90 There were 93 births and 58 marriages reported , 25 deaths occurred in hospitals and 13 were reported by the coroner

Election of Officers in the Post-Graduate School of Medicine —The board of incorporators of the Post-Graduate School of Medicine of the District of Columbia held a meeting at the office of Dr Samuel Busey on the 5th inst and elected officers for the ensuing year as follows President, Dr Samuel C Busey First Vice President, Dr J Ford Thompson , Second Vice-President, Dr W W Johnston , Secretary, Dr G Wythe Cook, and Treasurer, H L E Johnson The following committees were appointed Curriculum, Drs James Kerr, S S Adams, Edward L Tompkins, W H Wilmer and E M Parker , Executive, Drs H L E Johnson G N Acker and Thomas E McArdle The constitution and by laws as drafted by a committee consisting of Drs H L E Johnson, W H Witmer and E L Tompkins were adopted

Medical Society of the District —At the meeting of the society held on the 6th inst , Dr T O Belt read an essay on ' Consanguineous Marriage as a Factor in the Causation of Disease " This valuable contribution to science brought out a discussion which occupied the entire evening and was participated in by Drs Butler, Shoat, Ritcher, Loring, Berman, Kleindschmidt, Chappell, W W Johnston, H L E Johnson, S S Adam and Ward

Detroit Notes

The Board of Health has given notice to the profession that the following cases are to be reported and placarded for quarantine smallpox, varioloid, typhus fever, Asiatic cholera, diphtheria scarlet fever, measles, glanders or farcy in man and wherever known in horse, and membranous croup That typhoid fever, chickenpox and whooping cough are to be reported, not quarantined or placarded The Health Officer on account of the spread of diphtheria has asked the Board to appoint physicians to examine the throats of all children attending the public schools , and when one is found suffering with sore throat, it is to be noted and the case followed to its home, so as to prevent as much as possible the spread of diphtheria

The Health Office Report for week ending Nov 9, 1895, shows deaths, total 140 , under 5 years, 37 Births, male 55, female 45, total 100 The contagious diseases for same period diphtheria, last report 41 new cases 37, recovered 24, died 11, now sick 43 Scarlet fever, last report 9, new cases 5 recovered 2, died 1, now sick 11 Smallpox, last report 1, new cases 1, recovered 1, died none , now sick one The death list has been swelled by the awful disaster that befell the *Detroit Evening Journal* Building, in which several minor manufacturing concerns were established This building was entirely destroyed by the boilers exploding, and resulted in the death of thirty seven people, men, women, boys and girls, and a considerable number of injured and burnt Some idea of the nature of the ruins can be arrived at when it is known that the last body to be removed from the *débris* had lain where found for fifty-nine hours, and was buried under tons of brick, stone and iron, and nearly all this time, night and day, the city had many of its laborers with horses removing the rubbish This disaster has shown the public the advisability of having a physician for coroner The jury that will hold the inquest upon the unfortunates, is composed of representative business men

The Wayne County Medical Society held its regular meeting on Thursday, November 7 at Dr J E Clark's office Dr Wm A Hackett read a paper entitled, " Points of Diagnosis in Skin Disease "

The Detroit Medical Library Association had a paper by Dr E S Sherrill, entitled, " The Tests and Chemic Significance of Albuminuria "

The Medical Colleges have opened with an increased number of students , the Detroit College of Medicine having 275 in its medical department, 69 in the dental, and 34 in the pharmacy, and the veterinary coming last in number with 10 The Michigan College of Medicine and Surgery has enrolled in its senior class forty-one, junior twenty-five and freshman twenty The pharmaceutic department to this school has been abolished this year

St Louis Notes

The Mortuary Reports for the week ending November 9 give deaths, 167, preceding week, 218, corresponding week of 1894, 153 , death rate, 15 5 per 1,000 Deaths under 1 year, 24 , under 5 years, 41 , over 60 years, 36 Births reported 167

Contagious Diseases reported during the week ending November 9 diphtheria, cases 136 , deaths, 15 croup, cases 12, deaths 4 , scarlatina, cases 9 , typhoid, cases 5, deaths 1 , measles, cases 12 , cerebro-spinal fever, 1 case, 1 death , whooping cough 1 case, 1 death

The St Louis Medical Society — At the meeting of November 9 the scientific program was made up of an exposition of the methods of producing diphtheria antitoxin by Dr Ravold, bacteriologist of the City Board of Health, and a general discussion of the effects of antitoxin in the treatment of diphtheria Dr Ravold explained the method used by the Departments, emphasizing the care taken in every step of the process, and especially the necessity for a painstaking selection of horses and proper care of them during their treatment with the toxin He stated that the Board was now in a position to furnish a considerable amount of antitoxin of a definite strength The dose of this product advised was 20 cc Upon application the Board furnishes the antitoxin free for use in cases that have been properly diagnosticated, requiring only that a careful history of the case and the result of treatment be reported on blanks furnished for that purpose The cases thus far treated had been too few to warrant any report but the results had been entirely favorable The Board of Health was anxious to meet every requirement in this service and invited criticism that the service might be made as highly efficient as possible The speaker was most cordially congratulated on the work done, and the favorable reception given his paper showed how generally the new treatment has won its way into the favor of the profession The general discussion was of special interest from the fact that it brought out no unfavorable experiences All those who had used the antitoxin spoke of its effects in the most enthusiastic praise Dr Langan, who is using it daily, has not yet had a death from diphtheria since he began to administer it, and no unfavorable complications attributable to the antitoxin He uses the remedy to the exclusion of all others, so that his results are to be attributed to the effect of antitoxin alone

The question of erythema and dermatitis with desquamation as occasional effects of the serum was raised by Dr Grindon In the experience of those who had used the antitoxin such phenomena had been but seldom developed and in no case had they been of serious import The complication was in the opinion of Dr Ravold, attributable to peculiarities of the serum other than that upon which its antitoxic power depended, for the serum of some horses produced erythema etc while that of others was without such effects The preservatives used carbolic acid and trikresol were not without objection on this score, as well as on the score of their reduction of the immunizing value of the serum, and he had abandoned these stronger preservatives for camphor which was sufficiently antiseptic for the short period elapsing between the production and application of the serum supplied by the Board of Health He emphasized the necessity of waiting for two or three weeks after the last immunizing dose of the toxin had been administered to the horse before drawing the blood for the separation of the serum, and pointed out how this precaution was apt to be neglected where commercial features attended the production of the antitoxin

THE AESCULAPIAN SOCIETY —Under the auspices of this society Dr Arthur E Mink, of the St Louis College of Physicians and Surgeons gave a lecture at the college November 9 on 'The Psychology and Philosophy of Shakespeare'

THE WABASH SURGEONS —The annual meeting took place in the Southern Hotel, Nov 12 1895 The scientific program included the following papers Delayed and Non union of Fractures by Dr J A Wentz Montpelier, Ohio, Responsibility for Railroad Accidents, by Dr George R Highsmith, Carrollton Mo Hemorrhagic Diathesis, its Relation to Injuries by Dr M Puckett Glasgow, Mo, How to Treat Wounds of the Face by Dr W J Taylor Martinsburg, Mo Two Cases of Open Wounds of the Ankle Joints, by Dr I W Young, Bloomfield, Iowa Fracture of the Vertebrae Dr Burres, Sidney Ill, Fracture of the Femur, by Dr Beardsley, Lafayette Ind, Traumatic Insanity, by Dr James A Duncan, Toledo Ohio, Injury of Cranium and Contents by Dr Jared Spooner, Peru Ind Diseases and Injuries of the Eye peculiar to Railroad Employes by Dr A F Pence Springfield, Ill, The Treatment of Typhoid Fever, by Dr Ben S Lincoln, Missouri City Mo, Intestinal Obstruction Necessitating Laparotomy by Dr Joseph Payne, Edwardsville, Ill, Color Blindness, Methods of Detecting It by Dr I L Henderson, St Louis, Trephining the Spine in Cases of Fracture of the Vertebrae by Dr C B Stemen, Fort Wayne, Cranial and Intracranial Injuries, by Dr W H Meyers, Fort Wayne

A NEW CITY HOSPITAL —The old City Hospital is notoriously unfitted for its purpose, beside inadequate in accommodations, and the Board of Health is discussing a project for the erection of a new building that shall meet all modern requirements

A NEW MEDICAL JOURNAL —*The Specialist* is the name of a new medical journal that is to make its first appearance this month The publication office is at 2012 Washington Avenue The journal will be devoted to diseases of the eye, ear, nose and throat, and is intended to occupy a middle ground between the journal of general medicine and the purely special journal The name does not fairly convey this notion of its proposed function

THE PRACTICE OF MEDICINE WITHOUT A LICENSE —A certain Mrs Billenkamp attended and treated a child afflicted with diphtheria, claiming to have a remedy that would cure the disease The child died and the coroner's inquest resulted in holding Mrs Billenkamp responsible for the child's death She was prosecuted on a charge of practicing medicine without a license The judge discharged the prisoner on the ground that she had not appended the letters M D, to her name and therefore did not represent herself to be a physician This decision has been given here in similar cases and it points out the loophole for the escape of all unlawful practitioners The quack has only to advertise his ability to cure disease, being careful to avoid the use of M D It would be interesting to know whether the use of the abbreviation Dr would be considered as of general or special significance in such a case, whether its general sense might not be used as a defense for its use by any one for a special purpose The law should be framed to cover the spirit as well as the "letter" of the unqualified practitioner

Louisville Notes

DAMAGE SUITS —The profession of this city is much gratified at the result of two suits for damages brought against two surgeons for alleged malpractice In the Common Pleas division one Jno M Reager, sued Dr W O Roberts for $20,000, the plaintiff maintaining that unskillful treatment was received at the hands of Dr Roberts who treated him for a fracture sustained while at work for the railroad Judge Field declared it a non suit, and the case was thrown out of court Clara L Beadle brought suit against Dr L S McMurtry, for, $5 000, alleging that he had placed her under the care of an incompetent nurse, who allowed her leg to be burned by a hot water bottle The jury awarded Dr McMurtry a counter claim of $500 for services rendered the patient There was quite a little tilt between one of the witnesses for the defense, a prominent surgeon, and the lawyer for the plaintiff When asked why, the answer was made that a fee for such an operation could range from $500 to $5 000, the witness replied that he thought $5 000 not an exorbitant charge to one who could afford to pay,—and in the custom of large fees, the lawyers set the pace, and the surgeons followed suit The witness was dismissed and the sum asked for, awarded by the jury

PRACTITIONERS CLUB —At a meeting of this society, held November 13, Dr Gavin Fulton read a paper upon "Leucorrhea"

THE PUBLIC SERVICES

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending November 9, 1895

P A Surgeon L W Curtis, ordered to duty at the Indian Head Proving Ground

P A Surgeon James Stoughton detached from the Puget Sound Naval Station and ordered to duty at the naval hospital, Yokohama, Japan

P A Surgeon C F Stokes detached from the naval hospital at Yokohama ordered home and granted two months leave

Asst Surgeon H D Wilson detached from duty at the Indian Head Proving Ground, and ordered to duty at the naval hospital, Chelsea, Mass

Asst Surgeon C D Brownell, ordered to duty at Puget Sound Naval Station, on completion of his examination for promotion

LETTERS RECEIVED

Alta Pharmacal Co, St Louis Mo, Ayer N W & Son Philadelphia Pa Atkinson, Wm B Philadelphia Pa Adams Express Co, Philadelphia, Pa Allister A M Philadelphia, Pa

Butterworth Alice, Chicago, Ill Boyer, J S Chicago, Ill Beakler, C K, Alma Center, Wis Breedlove, J W Fort Smith Ark Bigelow J F Chicago Ill (2) Boyce J Wesley Washington, D C, (2) Boehringer C F & Soehne New York N Y Brunder, Geo, Milwaukee, Wis Bovinine Co New York, N Y, Bates, C A New York N Y, Bellwood, W S Alliance Neb

Clarke The Robt Co Cincinnati Ohio, (2) Chaille, S E, New Orleans La Chambers, J H & Co St Louis Mo (3)

Doyle G P Chicago Ill (2) Dewey F J, Chicago, Ill

Eastman Jos, Indianapolis Ind, Ellis H Bert Los Angeles, Cal

Fenn C M, San Diego Cal Fest F T B Plank Road Mich

Gihon A L New York, N Y Gaenslen, F J, Madison, Wis Graham D W Chicago, Ill Grinstead, J F, Chicago Ill, (2) Grothan, O St Paul Neb Griffith, J P Crozer, Philadelphia Pa, Gates L. M, Scranton, Pa

Haddock, Wm J Iowa City Iowa Hayd, H E Buffalo N Y Hawkes, R H New York N Y Horwitz, Orville, Philadelphia Pa Herbert, J Frederick Philadelphia Pa, Harriman, W E, Ames, Iowa

Instant Cut Off Co Port Huron, Mich Irving, P A, Richmond, Va, Irwin Fairfax Washington D C

Jenkins J F Tecumseh Mich Jones, Joseph, New Orleans, La, (2) Judson A B, New York, N Y Johnson H L E, Washington, D C

Kemper G W H, Muncie, Ind Keirulff, B F, Marshalltown, Iowa Keener The W T Co Chicago, Ill

Lord & Thomas Chicago Ill, (2) Lange I, Chicago Ill Lea Bros & Co, Philadelphia, Pa Lentz, Chas & Sons, Philadelphia, Pa, 2), Lyon S B Chicago, Ill

Mellier Drug Co The St Louis Mo, (2) Maltine Mfg Co The New York, N Y (2) Miller D P, Huntingdon Pa McEnroe John F Schenectady, N Y Mansfield Book Binding Co Mansfield Ohio Mattison J B Brooklyn, N Y Manley, Thos H, New York N Y McDougal J G New Lexington Ohio Mann, E C, New York N Y Moore, J W Atlantic Mine Mich

Neff Irwin H Pontiac Mich

Ochs, Anthony, Hespeler Ontario

Payne Geo F Atlanta Ga Pring Ernest, San Francisco Cal Parker W T, Groveland, Mass Peckham, J S Chicago, Ill, Paquin Laboratories Paul The St Louis Mo

Rehman S T, Chicago Ill Richardson W L, Montrose Pa Reeves, Jas E Chattanooga Tenn Rinehard C, Milwaukee, Wis

Sekowsky H, Milwaukee Wis Schimmel, M S Baltimore Md Salisbury J H Chicago, Ill Scott & Anderson Brownwood Texas Shlensky, I Washington, D C Sachtleben F A, Chicago, Ill Smart, Chas Washington D C Stearns, Frederick & Co, Detroit, Mich Sander, The Enno M W Co St Louis Mo

Turnbull, Laurence Philadelphia Pa

Vaughan, O M Covert Mich Vowinckel F W San Francisco, Cal

Warren Scharf Asphalt Paving Co New York N Y, Woolsey E H Oakland Cal Wilson I A W Chicago, Ill Wyeth, Jno & Brother, Philadelphia, Pa Webster, I H Evanston Ill, Wyman, Hal C Detroit Mich Ward, Marshall R, Pittsburg, Pa

The Journal of the
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ADDRESSES

CHAIRMAN'S ADDRESS

Delivered before the Section on Neurology and Medical Jurisprudence, at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY DANIEL R BROWER, M D
CHICAGO

Gentlemen —Through the indefatigable exertions of our distinguished Secretary, we have before us the best program ever presented to the Section

An effort has been made to arrange the work along three importent neurologic lines, and you will have presented to you papers on these several topics from some of the most eminent physicians of the country, and I trust that we will be equally favored in the learned discussions that will follow

As you observe, the first symposium is on hypnotism, a subject now very prominently before both the profession and the laity, and they earnestly desire that some such representative body as this, will make positive declarations as to its value in the cure of disease and as to its place in criminal jurisprudence The papers that will be read and the discussion that I trust will follow, will at least bring us *nearer* to a settlement of these important questions

The symposium on electricity is timely This force so prominently before everybody, and because of its varied and almost universal use, demands our careful consideration in order that we may assist, at least, in determining its true place in medicine The work of this Section will, I trust, not only aid in this important solution, but will develop new mechanical appliances to facilitate the use of the energy and new methods of application that may yield better results in treatment

The last symposium has for its subject epilepsy As you are well aware, this disease known from the very earliest times, accurately described by the most ancient writers, is still the *bete noir* of the profession Only about 7 per cent of the cases are cured, and about one in every five hundred of the population is so afflicted May we not hope that the papers and discussions that will emanate from this great array of talent may improve this record of curability and diminish this percentage of prevalence?

It is hardly necessary for me to take your time to review the work that has been done in the field covered by this Section during the past year Every person here present is as familiar with this as I am, but there are certain things in the line of progress with which you may not be so familiar In the State of Illinois we are about to try the experiment of an industrial epileptic colony, modeled somewhat after the Craig colony of New York and the famous Bielfeld colony in Germany It is proposed to begin this colony with the epileptics, about eight hundred in all, now in the county almshouses and other public institutions This colony may in part aid in the more successful treatment, as well as diminish the large proportion of these unfortunates now existing

In Illinois we are also trying to improve the quality of medical expert testimony Some recent trials in which much of the medical expert testimony was very discreditable, have aroused the profession to such a degree that the six prominent medical societies of Chicago met by their joint committee and drafted a bill that has been indorsed by all of these several societies, by the State medical society and several of the county and district societies, that may elevate the tone of this most important service It is as follows

A draft of a Bill for an Act authorizing the judges of criminal jurisdiction in the State of Illinois to appoint persons to act as expert witnesses

Be it enacted, By the People of the State of Illinois in the General Assembly represented, That the judges of the circuit and superior courts of the State of Illinois, be and the same are hereby authorized to appoint in the month of January of each year, persons who shall act as expert witnesses in the medical and other sciences in giving opinion upon the evidence, as presented in a hypothetical form, of criminal causes that may be on hearing in the courts presided over by the said judges Such expert witnesses shall hold their said appointments for one year or until their successors are *appointed and qualified They shall be entered as expert* witnesses upon a list of such witnesses kept by the circuit clerk, and the said clerk shall issue a certificate of appointment as such expert witness to the person appointed as above

Such expert witnesses shall be citizens of the State of Illinois and shall be known in the communities where they reside for their professional competency and personal probity, and if physicians they shall have been at least five years in lawful and active practice When expert opinion is desired in any cause pending in a criminal court, the trial judge presiding in such cause may, at his discretion summon for duty under this Act, such expert witnesses to the number of three Such expert witnesses shall be paid for their services by the county in which the trial for which they are summoned is held, in such sums as may be named by the judge

It shall be the duty of such expert witnesses to give an opinion on the evidence as presented in hypothetical form in the case in which they are called Such experts shall be subject to cross examination by both prosecution and defense , but such cross examinations shall be limited entirely to the subjects embraced in their opinion

In criminal cases previous to trial, if the State's Attorney deems it advisable to have expert opinion, he shall so state to the court having jurisdiction of the cause and the judge receiving such statement may summon expert witnesses to serve under this Act

This Act has been amended as follows

A BILL

[HOUSE BILL No 767]

For an Act to regulate the taking of expert testimony in civil and criminal proceedings

SECTION 1 —*Be it enacted by the People of the State of Illinois represented in the General Assembly*, That in any case on trial in a court of record in this State where expert testimony is to be introduced by both the prosecution and the defense and also in any other case in the discretion of the court the presiding judge shall, either of his own motion, or at the request of either party to the suit subpœna one or more persons who shall be known as court witnesses

SEC 2 —Such court witnesses shall be citizens of the State of known personal probity, and only such as are recognized in the communities where they reside as having special knowledge and experience pertaining to the subjects upon which they are to testify; and if physicians, they shall have been not less than five years in lawful and active practice

Sec 3—The presiding court shall fix the fees of such court witness or witnesses, but in no case shall the fees allowed such court witness exceed fifty ($50) dollars per day Such witnesses shall be paid in the manner provided by law for other witnesses, except that in criminal cases the fees of such witnesses shall be paid by the county

In this amended form, the bill will probably become a law

In closing, I can not refrain from making mention of the important studies that have been made on the influence of infectious processes on the nervous system. Drs Mills, Putnam, Dercum and others have shed a flood of light upon this important subject, and suggest methods of relief that may lead to valuable results

I must also mention the studies on the use of the thyroid gland in the treatment of sporadic cretinism by Drs Telford Smith, Byran Bramwell and others that seem to offer some relief to these imbeciles, and teach us relations of the thyroid gland to general nutrition never before known

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RESPONSE TO THE TOAST, "EPHRAIM McDOWELL"

Delivered at Annual Banquet of the Chicago Gynecological Society[1] Oct 18, 1901

BY JOSEPH EASTMAN, M D

INDIANAPOLIS

In a hallowed spot, a typical American home, in Rockbridge Co, Va, Nov 11, 1771, a male child was born It has been said that "great men, like great mountains, stand alone, with the valley of ancestry on the one side and the gulf of posterity on the other' This towering character, however, did not stand alone, for the foot-hills of his ancestry were of decided magnitude, prophetic of a genius destined to become one of the greatest benefactors of the human race His ancestry for three generations commingled the best Scotch and Irish blood, coursing the arteries of men and women of strong bodies and strong characters—characters emphasized, energized and vitalized on historic battle-fields with red-skins, red-coats, wild beasts and hardships of the primitive Virginia forests

Figuratively speaking, this child was number nine in a family of eleven children When 13 years of age his parents moved to Danville, Ky, a long, tedious and even perilous journey, a journey in itself well calculated to develop and toughen the fibers in our valiant hero

At Danville he grew up to full physical manhood, tall, well proportioned, beautiful What a wonderful advantage it is to grow up in the country, to commune with nature, to enjoy the beauties of green fields instead of paved streets, to gaze on great oaks and elms instead of steeples and chimneys, to see the radiant tints of the morning dawn and the beauties of the setting sun, where the mind can grow commensurate with a healthy body, where one can develop and cultivate the greatest of faculties—that of thinking, without having the continuity of thought interrupted by the rattling of electric cars, the rumbling of omnibuses or the shrieking whistle of steam engines, where one can see in reality what art galleries only imitate, and while enraptured with the works of nature and the created, become filled with the realization of the existence of a Creator And then, too, to be reared under the influence of such parents as our hero had The lasting impressions of our lives are received beneath the cloudless sky of childhood, while our guiding star is the approving twinkle of the paternal eye, the chief luminary of our pathway the vitalizing sunshine of a mother's countenance, and every footstep guided by the subduing influence of a mother's love

After obtaining his literary education at Georgetown, Ky he went as a student of medicine to Dr. Humphries, in Stanton, Va History tells us little of this Dr Humphries except that he was educated at the University of Edinburgh, but surely he, too, was a man of great intellectual endowment Dr. Samuel Brown, of Kentucky, and Dr Hosack, of New York, were also his pupils and arrived at a great distinction as practitioners and teachers of medicine and surgery In 1793–94 our hero attended lectures at the University of Edinburgh Pause for a moment, and think of a young American so ambitious that the entire faculty of this great university could not satiate his thirst for knowledge, for going outside he employed Dr John Bell, a great character, so enraptured in teaching anatomy and surgery that he filled his pupils to overflowing with professional zeal. In 1795 our hero returned to America and began the practice of medicine at Danville, Ky, where he soon had a large clientage, often riding 50 and 100 miles on horseback He faced dangers from storm and flood, in clouds and darkness at night, at times becoming lost in the dense forest He was actuated by the higher principles of his profession, he feared neither man nor devil, he knew no fear except the fear of doing wrong The degree of his happiness was determined by the magnitude of his undertaking.

On Dec 13, 1809, he was called to see a Mrs Crawford whose attending physician had thought her pregnant, although he knew she had gone beyond the usual time Dr Eastman being a thorough master of all that was known of that highest department of our art, namely, diagnosis, declared that she had an ovarian tumor and at once suggested its removal Had he deceived her by an untruth, or kept back from her the whole truth, she would have known it, would have read it in his countenance, and would not have replied "Doctor, I am willing and ready" But he stated to her that so far as he knew the operation had never been done—that it would be an experiment, therefore he could make no promise as to the outcome He thus unlocked the bosom of confidence with the key of personal magnetism By his manly presence and honest words, he planted a new hope in the heart of despair This woman made the journey sixty miles on horseback on a bleak December day in compliance with the wisdom of this great and good man, that she might be near him so that in a critical moment he could with his own hand ward off the approaching danger When it became known what he was about to undertake, he found a mob was gathering about his house He learned that if the patient recovered it would be well with him, but if she died from the operation he was to be at the mercy of a merciless mob He offered up a prayer and proceeded with his task This prayer in fervency and literary merit has rarely been equaled Permit me to remark, greater heroism was never displayed by man or woman Martyrs burned at the stake could not escape the death if they would This personification and crystallization of heroism could not abandon his principles, and escape the danger if he would More than that, genuine heroism must be delicate, must be premeditated, must be actuated by a pure a high, a holy and beneficent motive It was not a maddening pseudo heroism stirred up by the rattle of drum and shriek of fife on battle fields, where man seeks to slay his fellow-man.

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[1] Delivered without manuscript

I insist that the heroism of Napoleon or Grant can never be compared to that of this cool, calculating, thinking man I repeat the heroism that seeks to destroy human lives is incomparable with that which seeks to save a human life and establish principles which shall not only save one life, but which shall continue to save human lives throughout all coming ages The operation was completed, and during nearly a century has not been improved upon, his technique was almost identical with what we have to day The substitution of a gauze for the drainage tube still more nearly approaches the ligatures which he allowed to hang out the lower angle of the wound—the best of capillary drainage Mrs Crawford lived thirty years Our hero made the operation thirteen times with eight recoveries, and at 60 years of age returned from visiting a patient, laid down his instruments for the last time and secured that rest which he never could enjoy while a call to the bedside of a suffering patient was pending Surely such a life of unselfish devotion to the cause of humanity would make him a fit companion for the gods

"To such a life there is no death,
What seems so is transition
His life, his mortal breath,
Was but a suburb of the life elysian
Whose portals we call death"

He was an honest man, honest to his patients, honest to his God, and therefore honest to himself He was a great man with a large head, a large capacity for thinking, and a large, a true and a loving heart—essential qualifications for a great surgeon

He was a wise man With inborn wisdom he accumulated and applied knowledge He was a brave man No truer heroism has or ever will be recorded on the immortal pages of never ending history He was a humane man He owned slaves, occasionally bought one to unite families—but never sold one He did not approve of traffic in human blood

He was a handsome man

'Beautiful eyes are those that show,
Like crystal panes where heart-fires glow,
Beautiful thoughts that dwell below
Beautiful lips are those whose words
Spring from the heart like songs of birds—
And yet whose utterance prudence girds
Beautiful hands are those that do
Work that is noble and brave and true
Moment by moment the long day through"

His was a beautiful life

'Beautiful lives are those that bless,
Some silent river of happiness
Whose secret fountains few can guess"

Virginia is justly proud of her statesmen, of her orators and her soldiers, "but shall not the achievements of her statesmen succumb, at last, to the pitiless logic of events? Shall not the voice of her orators grow fainter with coming ages? Shall not the victories of her soldiers be found at last only in the libraries of students of military campaigns, while the fame of this village surgeon, like the ever-widening waves of the inviolate sea, shall be wafted to the utmost shores of time, hailed alike by all nations in all ages for having lessened the burden and prolonged the span of human life" A thousand years hence, if a student of medicine shall ask who first did ovariotomy the answer will be prompt and unequivocal As a result of this self-sacrificing life and marvelous achievements there goes forth a benediction to every home in the civilized world, from every hearthstone in Christendom there returns a blessing to the memory and the resting place of Ephraim McDowell All honor to this honest, great, wise, heroic, good, kind, gracious, loving and lovable man!

ORIGINAL ARTICLES

A CASE OF CONGENITAL MUCOUS POLYPUS OF THE NOSE—WITH REMARKS

Read in the Section on Laryngology and Otology at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md, May 7-10, 1895

BY DUNBAR ROY, M D

PROFESSOR OF OPHTHALMOLOGY AND OTOLOGY IN SOUTHERN MEDICAL COLLEGE, ATLANTA GA

It is not my intention in this short article to go into the minute discussion of that pathologic condition known as mucous polypi of the nasal cavities, nor to adduce any new and original method for their eradication which has not already been brought before the profession at large, but with a few prefatory remarks I wish to report the history of a case of congenital nasal mucous polypus which is of sufficient rarity to render its report not entirely inappropriate for this Section The subject of nasal polypi is an old one and perhaps the first morbid condition of these cavities which was undertaken to be rectified by the surgeon and physician alike, since its presence was perhaps the easiest recognized of all diseased states of the nasal cavities Our medical periodicals and society reports have for the last few years teemed with articles upon the etiology and best method of treating polypi until, at the present date, one wonders that any physician should slip into the error of even mentioning the subject unless he has, by original research, some new light to throw upon certain points as yet disputed The two points which have especially vexed rhinologists and upon which there seems to be the greatest diversity of opinion, are the etiology of these mucous growths or outgrowths and the best and most satisfactory method of treatment

As to the etiology, there is by no means a unanimity of opinion, but, in fact as would naturally be expected, each rhinologist holds his own views upon the subject The only point upon which they all agree is in recognizing this pathologic condition as one of adult or advanced life, and a condition of extreme rarity in the very young To the rhinologist who has had any extended experience in the treatment of nasal polypi and has been a close observer the views of Woakes of London, or at least a modified form of them, must certainly present the clearest and most satisfactory explanation in regard to the etiology M McKenzie admits that the etiology is unknown, while Sajous says that it is due to a chronic inflammation of the Schneiderian membrane But why is it that the same character of inflammation certainly as far as we can observe, produces polypi in one subject and not in another? I, myself, am a strong believer in hereditary predisposition, especially as I have seen this morbid condition in different members of the same family, and every rhinologist is familiar with the characteristic nasal expression in patients afflicted with nasal polypi, which is by no means always a *propter hoc*

Nor are all writers agreed as to what is the usual condition of the mucous membrane lining the affected side, since some hold that it is always hypertrophied while yet others that atrophy exists

Woakes' theory of explanation as I understand it, is this that long standing chronic catarrh of the hypertrophic variety causes the middle turbinate to return to its embryonic condition, that is, it becomes cleft in two portions running antero posteriorly Between this cleft, the blood supply not being sufficient, true mucous membrane is not formed, but in its stead a myxomatous structure accumulates, which by gradual enlargement increases the space thus formed and which in its final development is a true mucous polypus These views of Woakes upon "necrosing ethmoiditis" a most unfortunate term, have been severely criticised by some throughout the medical world, and especially has it been done in London by Walsham, Hill and Lennox Browne, a full discussion of which was published in the *Journal of Laryngology* of August, 1891 As every one knows, Browne has long antagonized these views and his ideas upon the subject are, according to him, in accord with the majority of rhinologists, believing that when such a condition of affairs exists as Woakes describes, it is accidental rather than universal He contends that in such cases the evidences of this necrosing condition are absent, both histologically and clinically, viz absence of odor, the sequestra of necrosed bone and other pathognomonic symptoms Woakes, on the other hand, replies that he did not mean that necrosis was present in every case, but that the pathologic condition was such as to lead to it were the parts not radically treated Whether we agree fully with these views or not, I believe every rhinologist must admit the importance played by degenerative changes in the ethmoid, especially the middle turbinate, in the production of polypi, chronic discharges, etc

Dr W E Casselberry of Chicago, in a paper read before the American Laryngological Association in May last, has discussed the question of etiology and treatment in a most admirable manner, and has instituted a classification which accords entirely with my own clinical views It is a paper well worthy of preservation and one that should be in the hands of every rhinologist

While nasal polypi in the adult is a common occurrence and their pathology has been minutely studied, the same condition in children is extremely rare, and therefore by no means so clearly understood M McKenzie, with even his large experience, is reported to have said that he never saw but one case in a subject under 16 years of age The rarity of these cases has been the ground for their being reported in the medical literature S Hopmann of Paris, has reported that he found nasal polypi in 8 children out of a total of 246 such cases operated upon Natier, in the *Annales de la Polyclinique* of July, 1891, has published an elaborate study of mucous polypi in children up to the age of 15 He compares the general opinion as to the extreme rarity of these growths during the first years of life with that of Hopmann who considers them sufficiently frequent before the fifteenth year to represent a proportion of 7 per cent Natier was not able to find a single instance in 1,200 cases of nasal trouble carefully examined at his clinic, including a large number of children as patients, while, at his request, a close examination of the records of Moure's clinic recorded only 5 cases of mucous polypi in children among 10,520 cases He therefore concludes that Hopmann must have met with a series of cases as a coincidence, or that the climate of the region in which he lives is particularly favorable to the growth of these neoplasms The same author, in the *Paris Medicale* of February, 1892, reports a case of congenital mucous polypus, and in looking up the literature he has found of congenital polypi, in addition to his own, three cases of polypi in children under 5 years of age, ten cases in children between the ages of 5 and 10 years, and sixteen between the ages of 10 and 15 LeRoy of Paris, has reported a case of congenital polypus by finding that an infant had much difficulty in taking the breast, and on examination a polypus was found in the left nasal fossa Cases of polypi removed from children under the age of 7, have been reported by P Heymann and Michael of Hamburg

From these few prefatory remarks, one may judge of the rarity of such cases of congenital polypi, and of those occurring in children under the age of 15 I believe, however, that if a thorough examination was made in cases of children suffering with a chronic discharge from, or an obstruction in, the nasal cavities there would be a greater number of such cases reported than has heretofore been the case

The case to which I now wish to call your attention presented some striking features in the cavity from which the growth was removed, and which I shall speak of in detailing the history

In one of my routine visits to the Home for the Friendless, the matron brought in a young girl 14 years of age, who complained of her inability to breathe through the left side of the nose On inquiry the following history was elicited

Her father was living, but mother dead According to patient's statement she has never been able to breathe through the left side of her nose At the age of 5 she was chloroformed three times when growths were removed from the left side of the nose, and in the last six years she has been operated on three times, having had large pieces removed at each sitting—with the result, however, of never affording her breathing space on that side At present she says her nose feels about as well as it ever did She complains of marked asthenopia and photophobia of the eyes Is unable to read for any length of time. Suffers with headaches Otherwise the patient is well nourished and is of a large and healthy frame

Upon examination, I found one immense mucous polypus which filled the whole left nasal cavity, from the anterior meatus back into the post-nasal space With a Jarvis snare, I removed what I thought a good portion of the growth, but to my surprise on again inspecting the parts, no impression seemed to have been made upon its size As my surroundings for operating were very unsatisfactory, I instructed the matron to bring the young girl to my office In two weeks time I operated again, removing two pieces about the size of the first, and on my third attempt succeeded in invaginating the greater portion of the polyp with the wire loop, and in this manner finally removed the growth *in toto* Strange to say, there was no bleeding whatever, and on inspecting the cavity I found the following conditions the mucous membrane was atrophic throughout, and there appeared nothing but a large, open, glistening cavity The inferior turbinate was scarcely discernible as such, while the middle turbinate showed but the slightest rudimentary shelf The whole outer wall of the cavity showed one large depression in which the polypus had evidently lain The septum at its lower portion was perfectly straight while the upper part of it was very much deflected toward the right, showing the evidences of mechanical pressure No secretion whatever was present High up beneath the rudimentary portion of the middle turbinate, the growth had its origin from a space not over one-quarter of an inch in length No distinct cleaving of the turbinate was recognizable The point of origin could be thoroughly cauterized so that I fear no prospects of a return, as now evidenced after several months

From the history of the case and the changes found in the nasal cavity after the removal of the growth, there is no doubt as to its being congenital in origin The important features about the case were the destructive changes which it produced through pressure upon both sides of the cavity The right side showed no marked pathologic changes save a distinct hypertrophy of the inferior turbinate, which was so much in contrast to the atrophy existing in the left nasal cavity

Dr Jarvis in the *Journal of Respiratory Organs*, April, 1890, in an article upon nasal polypi, insists upon the importance of the superior deflection of the septum as a cause for the growth of polypi and the necessity for its correction in order to effect a cure He, therefore, explains the etiology of congenital and hereditary cases by attributing them as due to this herditary septum

Cordone of Italy, has reported a case of congenital polypus where he found the same superior deflection of the septum as referred to by Jarvis, and which thus supports the views of the latter

In my own case this deflection was a very noticeable feature, whether it was one of the causes or only a result of the polypus I am unable to say, but my firm opinion is that it was the latter, since in the point of origin I could see no relationship between the two

In regard to the treatment of polypi I have nothing new to offer, only that I wish to add my testimony to the success of a treatment recommended by Dr E H Griffin of New York, and that is the spraying of the affected nasal cavity every night and morning for a year with either hamamelis or pure alcohol Since the majority of polypi spring from the sulcus, up and behind the middle turbinate, I have found it best to saturate a piece of cotton with pure alcohol, pack it firmly in the sulcus and allow it to remain for half an hour at the time Such mild and prolonged treatment may be criticised by my more radical colleagues, but in many patients who are so averse to any operative measures in their nasal cavities, I have found this mode of procedure of inestimable value

DISCUSSION

Dr Price Brown, Toronto—Has only seen one case of congenital nasal polypus This occurred in a child aged 2½ years The polypus was pedunculated and presented in the naso-pharynx, being visible orally Under chloroform I removed it digitally, scratching off the polypus from this vault by the finger nail

Dr S K Merrick, Baltimore—Touching the question of congenital polypi, I have never seen a case which I knew to be congenital, but I have had at least two cases under 2 years of age, when a history of obstruction had existed from birth, or shortly after, and I am willing to accept as an established fact that we do have congenital polypi As to the etiology, I believe in many cases imperfect drainage, due to deflection or spurs of the septum is a contributing cause, and as to the question of site of origin being invariably from the turbinates, I am prepared to disprove I have a specimen removed from the nose of a man 48 years old, where a large spur, having a large mucous polyp attached, is suspended in alcohol, showing the polypus growing from that portion of the septum

Dr Casselberry—Some years ago I reported the occurrence of a nasal polypus in a girl aged 9 years who had been previously affected for several years It must have originated at a very early age, although I do not think it was congenital At that time I expressed an opinion that nasal polypus in young children was not so rare as had been generally supposed Concerning the etiology, Dr Jonathan Wright concludes from microscopic studies that they are inflammatory growths occurring in the course of chronic rhinitis, although why the minority only of cases of chronic rhinitis should suffer from this complication and the majority escape, is not yet known I have elsewhere pointed out that deflection or excrescence of the septum or other conditions which cause unusual narrowing or stenosis of the nostrils by impairing the natural drainage and causing the accumulation of decomposing muco-purulent material might influence the transformation of the ordinary hypertrophic rhinitis into the myxomatous type All degrees of this transformation are observed clinically, especially on the middle turbinal from that which is best described as a polypoid degeneration of the hypertrophied turbinal to the typical pedunculated polypus which may occasionally be found attached to the middle turbinal itself The more common point of attachment for polypus, however, is in the middle meatus, high up beneath the middle turbinal, growing from and projecting through the hiatus semilunaris from the immediate vicinity of the ethmoid cells, and in these cases the underlying condition or cause is an ethmoiditis, not necessarily of a 'necrosing" type, but that which is better termed a myxomatous ethmoiditis

The treatment should consist of as thorough extirpation as possible by the cold wire snare, followed by curetting of the base The galvano-cautery experience has been shown to be objectionable, on account of the liability to the formation of adhesions when insinuated into crevices In certain obstinate cases, in order to gain access to the seat of attachment in the middle meatus, I have resected the anterior end of the middle turbinal

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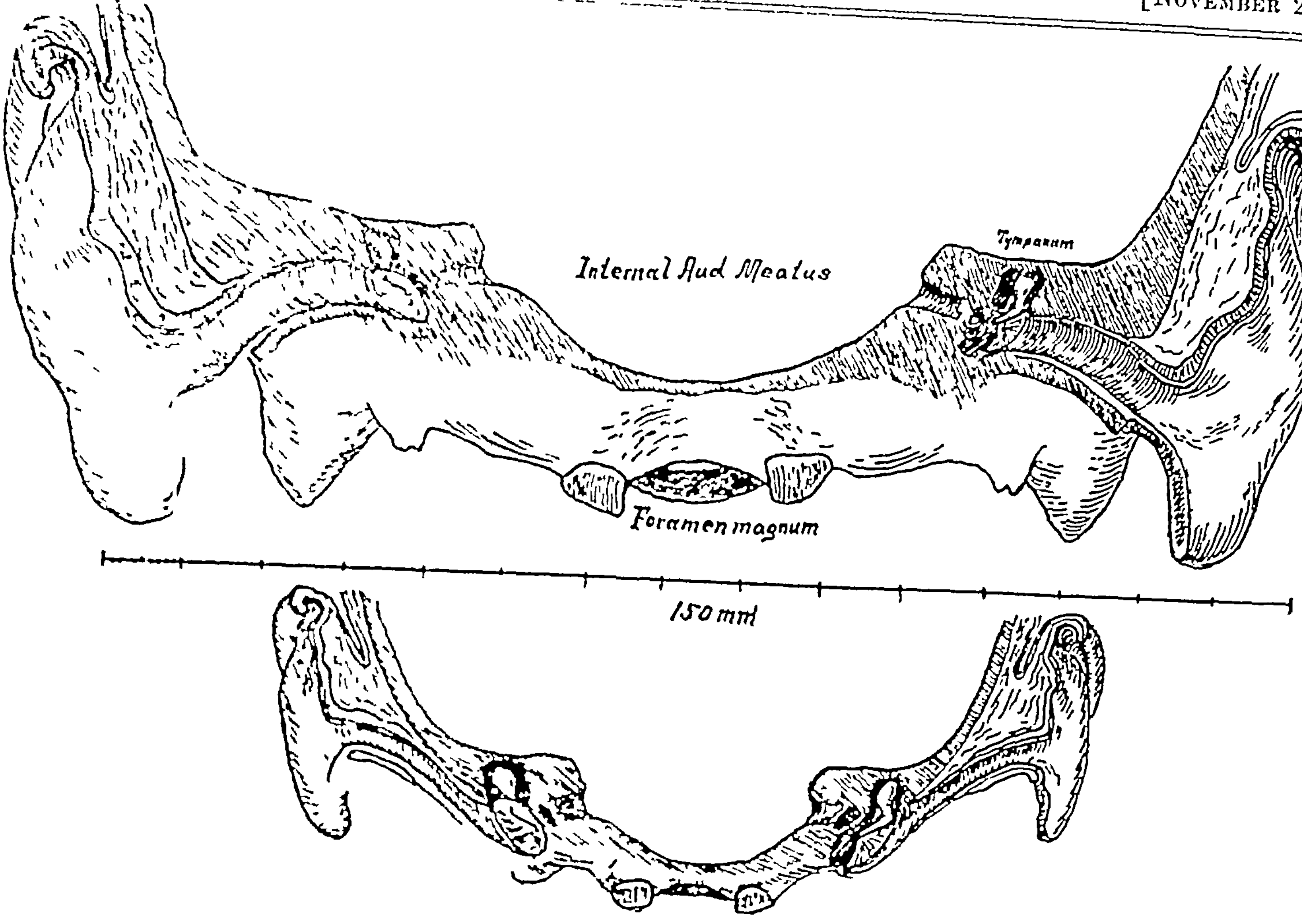
THE IMPORTANCE OF AURAL ANATOMY IN ROUTINE CLINICAL WORK

Read in the Section on Laryngology and Otology at the Forty sixth Annual Meeting of the American Medical Association held at Baltimore Md May 7 10 1895

BY B ALEX RANDALL, M A, M D
PHILADELPHIA

That the aural surgeon must have the topography of the ear and the surroundings clear in his mind and ready at his finger ends, when operating on the mastoid or still more within the tympanum, is evident to all He must be thus posted, or wholly belie his status as a specialist Yet it is no less true that the practitioner who would well treat, topically, the routine cases, still more attempt paracentesis as most of the text-books advise, must know the variations in the configuration of the external auditory canal, the size, depth and inclination of the drum-head and the structures which lie beyond it within easy reach of damage by his manipulations Unfortunately, much experience in post-graduate teaching shows that the majority of men of some otologic experience reveal serious defects in this direction, and do some very bungling work, however posted in the theory not so much from inexpertness, as because of erroneous anatomic impressions

For this, many text-books of surgery, anatomy and even of otology are distinctly at fault Misstate-

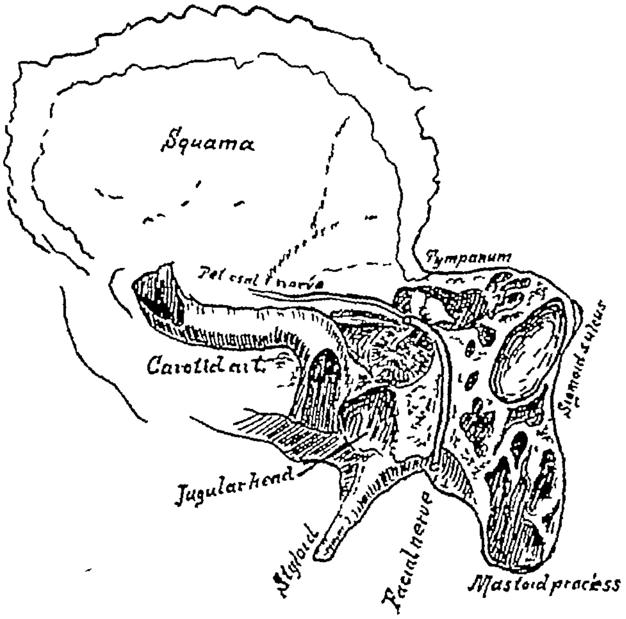


ments abound and pass current without the brief examination needed to correct them Hard and fast statements are made as to the most variable points, alternating with vague and inadequate data on matters calling for more explicit description Few even of the aural treatises deal adequately with the external meatus in its individual variations and its development from the infant to the adult form I find a common misapprehension, that because the drum-head of the infant is on the plane of the skull surface the auditory canal must be shallow The astonishment with which physicians see a probe passed in an inch and a quarter, before touching the tympanic membrane of an infant is almost universal The usual text-book statement that the drum-head is much more horizontal in infant life than later, is accepted, of course, and every demonstration of an identical position with that of the adult is generally looked on as an exception and anomaly That the drum-head, ossicles and labyrinth are full sized before birth, surpasses the credible to most medical men, who naturally support common analogy by text-book misstatements

The variable direction of the auditory canal counts as much as its width and straightness in the question of what should be visible at its bottom, but I know of no statistical measurements in this regard except those brought by me before the American Otological Society last year This is of extreme importance to the operator, but it greatly concerns every practitioner who undertakes to cleanse an ear Supposing a bulging inflamed drum-head offers itself with exceptional clearness to the view of the practitioner and demands incision, how few are acquainted with what lies within it, all too easily damaged by anything but the most precise operation The inclination of the drum-head to the axis of the canal is generally fairly stated in the books, yet few practitioners adequately appreciate how much farther from the surface the anterior part of the membrane is than the upper posterior In the narrow canal, little use can be made of parallax in estimating the distance of points, so one must generally depend on his anatomic knowledge of the position of known structures and, as to the unknown, make tentative use of the probe

The great importance of this combined employment of sight and touch in learning practical aural anatomy, inclines me to strongly advocate the use of the cotton carrier in cleansing, since it may be as gentle as any other means, while far more instructive and, at times, more efficient By such practice the beginner can speedily learn the relations and obtain a delicate confident touch, which will serve him equally in successful routine work and in the most intricate operative procedures Bearing these drum-head details in mind, incision of the drum-head can doubtless be safely done by any one of fair skill, unless he undertakes it as a stab of the chosen point, because so taught or from the unsteadiness of the patient Then he always endangers the structures beyond—the stapes, chorda and possibly the facial nerve, if operating up and back, the mucous membrane of the promontory below and the head of the jugular in the floor of the tympanum The reported cases where the jugular has been thus opened are probably far fewer than the occurrences of the accident, for it must not be forgotten that the thinnest of bone, often dehiscent, alone intervenes As to the facial nerve, its bony canal is not infrequently incomplete just above and behind the oval window, and aside from injury as the result of operation or even of mere probing or cleansing with cotton, this anatomic condition should not be forgotten in its rela tion to Bell s palsy That authority to the contrary notwithstanding, I am sure that the large majority of cases of acute facial paralysis are due to inflammatory affection of the nerve and its sheath, not at the stylo-mastoid exit, but as it passes through the tympanum The tympanic inflammation is generally transient and sometimes painless, but prompt study will rarely fail to note the evidences of it The bearing of this upon prognosis and treatment is evident

One farther instance may be cited—the anatomy of the Eustachian tube in its relations to the physiology of the ear and the therapeutic matter of inflation Anatomists and physiologists have contended as to whether the tube is normally in a closed condition Section shows its lumen reduced to a mere cleft by contact of the anterior and posterior walls, but Rudinger has pointed out the open "safety tube" above, in the hollow of the hook cartilage Clear as this is in the middle portion of the tube, it is not present throughout its length, and we are normally dependent upon the dilating action of the so called palate muscles (of which the outer portion of the tensor palati is at times purely a dilator tubæ) to render it patulous Of this, Politzer has furnished us a nice demonstration which is also a most useful test of the normality of the Eustachian tubes If the sounding tuning-fork is held before the nose, it will be faintly heard until the act of swallowing calls into action the tubal muscles, when it will be momentarily much more audible Without any needless inflation, we can thus at once test not only their physiologic condition, as could be only inferred from their ready penetration by the injected air, but can note even minor differences in the freedom on the two sides Another demonstration of the same normal closure of the tubes will be found in the contrast with the effort to exhaust the tympanum by a suction effort, with the completeness of the success of the Toynbee or negative Valsalva procedure, of swallowing with the nose closed



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RECURRING OR HABITUAL EPISTAXIS, WITH A CONSIDERATION OF THIRTY-SEVEN CASES

Read in the Section on Laryngology and Otology at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md, May 7-10 1895

BY E L VANSANT, M D

ADJUNCT PROFESSOR OF DISEASES OF THE THROAT AND NOSE PHILADELPHIA POLYCLINIC SURGEON TO THE THROAT, NOSE AND EAR DEPARTMENT OF THE HOWARD HOSPITAL ONE OF THE PHYSICIANS TO THE PHILADELPHIA HOSPITAL PHILADELPHIA

The term recurring or habitual epistaxis designates a class of cases where nasal hemorrhage of varied degrees of severity recurs at intervals, during a greater or less period of time The history given in some of the cases is that of a slight hemorrhage, perhaps only sufficient to lightly stain the handkerchief after blowing or picking the nose Such slight oozing may recur several times daily or at comparatively long intervals In other cases, the history is that of a profuse hemorrhage lasting several minutes or longer, which may occur after blowing the nose, or follow any slight mental or physical excitement The frequency of the attacks may vary considerably

Among the general causes of recurring epistaxis are

1 Diseases affecting the blood vessels or associated with alteration of the constituent parts of the blood as in scorbutus, purpura hemorrhagica, simple and pernicious anemia, plethora, hemophilia, malaria, and exceptionally in septic diseases such as pyemia, septicemia, etc

2 Certain acute diseases, such as typhoid and relapsing fever, and occasionally in pneumonia, diphtheria, etc

3 Diseases producing local or general vascular congestion, such as valvular disease of the heart, pulmonary affection, cirrhosis of the liver, chronic nephritis, amyloid degeneration and mediastinal tumors

4 It may be the expression of a vicarious menstruation, or,

5 May accompany the course of a pregnancy

Among the local causes may be assigned

1 Tumors such as fibroma, carcinoma and sarcoma, particularly angiosarcoma, fibro and myxosarcoma

2 Varicose enlargement of the veins, particularly on the anterior portion of the septum

3 Perforating ulcer of the septum

4 Trauma

5 Local ulcerations caused by syphilis, tuberculosis and lupus, and, finally,

6 Deformity of the septum, associated with erosion or ulceration of the mucous membrane of the septum

The most frequent predisposing cause is some slight deformity of the septum affecting its anterior portion The abnormality may be but a small or moderate sized enchondroma or exostosis, or it may be a slight deflection of the septum, the seat of some former fracture with marked thickening of the convexity

Accumulations of dust and mucus occur on the apex and anterior surfaces of the projecting portion, and as such accumulation is very difficult of removal by blowing the nose, the patient will endeavor to obtain relief by picking it away with the finger or the handkerchief, in so doing slight erosion of the mucous membrane occurs This may excite a slight hemorrhage, which in turn forms a small crust and the process of removal and bleeding is continued In some instances the process goes no further the patient having a slight hemorrhage only when the no-is picked In other cases the ulceration gradually extends deeper into the tissues and the hemorrhages are more profuse, often produced by simply blowing the nose or any mental or physical excitement

The ulcerations are most liable to occur when the deformity of the septum is moderate, whereas in marked deformity, producing great stenosis, the draft of air is so cut off that very little dust is drawn into the obstructed nostril and fewer crusts are formed.

In thirty-seven cases of habitual epistaxis occurring in my practice recently, I found that twenty-eight were due to slight deformity of the anterior portion of the septum as just described, with ulceration of the projecting or convex side of the deformity Three were due to deviation of the septum with ulceration on the depressed or concave side Two were due to ulcerations associated with atrophic rhinitis One was a vicarious menstruation Three occurred in typhoid fever

The severity and duration of the affection in the observed cases varied greatly. The majority of the patients were not aware of any existing nasal obstruction, nor was the deformity sufficient to produce marked stenosis In quite a number, various abnormalities producing catarrhal conditions were present, in addition to the septum deformity

The observation of ulceration of the septum as a cause of epistaxis is by no means a new one Among the articles calling attention to it may be mentioned those by G M Lefferts,[1] B Robinson, Chiari[3] and Baumgarten[4] The more recent text-books also recognize its etiologic importance The presence of slight septal deformity has, however, not been so generally recognized, nor has the importance of correcting such deformity in order to obtain permanent relief been well developed Again, the general profession has not fully appreciated the fact of this being so frequent a cause of bleeding Perhaps the trivial nature of the lesion in some cases, may be the reason that more importance has not been attached to it In a large number of the cases that came under my observation the local lesion had not been previously recognized although they had long been under medical care These cases were supposed to have some latent cardiac or vasomotor affection, but local examination revealed the true source of the hemorrhage

The following cases from my records will illustrate some of these observations

Case 1—Mrs A B, age 30 years, consulted me in January, 1892, with a history of repeated slight nasal hemorrhage She stated that in the left nostril a small scab frequently formed which she could only remove by hard blowing or picking The removal of the scab always caused a slight hemorrhage that lasted but a few minutes This condition had continued for the past four years and was better during the summer and worse during the winter The nose always felt free, except during the cold weather when catarrhal symptoms developed Examination showed a slight deflection to the right of the anterior portion of the septum Upon the apex of the deflection was a small ulcer covered with a crust, upon removing this a slight hemorrhage occurred With the exception of a moderate hypertrophy of the lower turbinated body of the opposite side, the nostrils were fairly normal The ulceration was readily healed by treatment, and the hemorrhage promptly ceased Operation for removal of the slight obstruction was, however, refused About three months later the patient returned with renewed ulceration and hemorrhages She confessed to having recommenced picking the nose A cure was again effected and operation again refused Since then I have had the same experience with her at intervals If this patient could refrain from picking the nose or have the septal projection removed there would be *no further* epistaxis

Case 2—Mr C D, age 19 years, college student, gave a history of recurring epistaxis for a number of years, in fact as far back as he could remember The hemorrhages were usually quite severe and at times difficult to check They usually followed blowing the nose or any unusual physical exercise such as dancing, playing tennis or ball, as well as mental or physical strain The bleeding would sometimes occur several times daily, again intervals of weeks would be between the attacks The patient since early childhood had been under the professional attention of a very experienced physician who looked upon the epistaxis as the local expression of some undeveloped cardiac lesion, and who informed the patient that the bleeding should be looked upon as a safety valve The patient had therefore been subjected every six months to a careful examination of the heart and lungs I first saw this patient in January, 1893, he was tall, thin and anemic He declared his nose felt free and unobstructed, that he never suffered from catarrhal symptoms, in fact, if it were not for the epistaxis would feel in the best of health On examination, a deviation to the left of the anterior portion of the septum was seen The deviation was quite angular, projecting about a quarter of an inch into the left nostril Over the projection the membrane was adherent, pale and scarred At the base of the projection the blood vessels were dilated On its anterior surface was found a round ulcer about one quarter of an inch in diameter covered by a crust Upon removal of this crust, bleeding occurred and the ulcer was seen to extend into the submucous tissue With the exception of a depression of the septum on the right, corresponding to the projection to the left, the nose and throat were in excellent condition Examination of the lungs, heart and liver, as well as the urine, showed absolutely normal conditions Upon questioning the patient confessed to occasionally picking the nose but declared himself unable to always abstain from the habit

Operation for the removal of the septal obstruction was advised and carried out in January, 1893 In about a week the patient was allowed to return to his home in a neighboring city Reports received from time to time showed subsequent absolute freedom from epistaxis although the patient now indulged in all the sports of a college student A note from my case book dated February, 1894, says that he has been entirely free from nasal hemorrhage since the operation There has been great improvement in his general health with considerable body development during the year About this date, while sparring, the patient received a violent blow upon the nose This caused renewed hemorrhages with some return of the septal deformity which, however, was easily corrected, and a recent report states that there has been entire relief from all epistaxis

In most of the cases observed the epistaxis was of rather a mild degree, but the following cases will illustrate how very severe the affection may become

Case 3—Mr P K, age 50 years, who consulted me in March, 1894, stated that since boyhood, he had had on an average three nasal hemorrhages daily These always were very severe and lasted from five to thirty minutes He had noticed that the bleeding usually followed picking or blowing the nose Of late years any mental or physical excitement would also cause it This patient was very anemic, and suffered from all the symptoms of that condition He stated that he had always been considered a "bleeder" Upon examination the septum was found to have an up and down S shaped deflection extending quite forward, with considerable thickening at the base On the anterior surface of the deflection were several small ulcers in each nostril The blood vessels of the mucous membrane covering the septum were varicose The nasal and pharyngeal mucous membrane appeared pale and sodden, with considerable secretion of mucus The posterior portion of each lower turbinated body was hypertrophied This patient acknowledged that he had been in the habit of picking his nose all his life When requested, he gave a demonstration which presented a vivid picture of the finger-nail scratching the septum Operation was recommended, but refused There was no difficulty in healing the ulcers, and causing the epistaxis to cease The patient was dismissed with a caution about picking the nose

Case 4—Mrs E F, age 38 years seen by me in December, 1894, gave a history of having had former nasal hemorrhages of a severe type and frequent occurrence, which condition had lasted fifteen years, and then about five years ago had ceased According to her recollection the bleeding was usually from the right nostril About three months before consulting me the epistaxis returned, this time apparently from both nostrils The hemorrhages however, were not so severe or frequent as formerly Examination showed an S-shaped deviation of the septum, running antero posteriorly The anterior projection of the S was well forward, to the right, while the posterior projection extended into the left nostril and further back Through the anterior curve a round perforation of about three eighths of an inch in diameter had occurred The presenting surface of the posterior projection to the left, was the seat of an ulcer, covered with a scab, the removal of which at once brought on a hemorrhage There was considerable hypertrophy of the lower turbinated bodies, as well as advanced granular pharyngitis

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[1] G M Lefferts, Medical News, 1882 vol xl, page 100

B Robinson, New York Medical Journal Sept 21, 1887,

[3] Wiener Medicin Zeitung

[4] Treatment of Epistaxis, Vienna, 1886

The patient confessed to the nose picking habit The hemorrhages ceased upon healing the ulcers, and stopping her bad habits In this case, I have no doubt but that the perforation was due to chronic ulceration of the septum, and that the temporary cessation of the hemorrhages came when the first ulcer had entirely perforated The renewed hemorrhages were due to the ulceration on the left side

Treatment for Control of Hemorrhage—As the point of bleeding is usually at the anterior portion of the septum, firm and continued pressure of the nostrils with the fingers or a clamp may be quite sufficient to secure cessation The head of the patient at the same time should be held erect or slightly forward, the patient sitting in a chair or partly reclining on a lounge If such pressure is not successful, small pieces of ice thrust into the bleeding nostril, and applied to the corresponding side of the nose, or cold applied to the spine, aid in checking the hemorrhage Again, full strength peroxid of hydrogen dropped into the nostril, or a plug of cotton saturated with the same and inserted, will usually form a clot sufficiently strong to check the bleeding Alum, 30 grains to the ounce of cold water, and sniffed up the nose, or applied by means of an atomizer, dropper, or on pledgets of cotton can be recommended Cocain in 4 per solution used in the same manner, and quickly followed by a 3 to 6 per cent freshly made solution of antipyrin, at times is quite successful, although care should be taken lest the depressing effect of the drugs add to any existing prostration If the patient seeks medical assistance, the bleeding point should be sought for, and is usually very easily found It may then be touched with copper sulphate or silver nitrate These may be used in solid form or in solutions A 5 to 10 per cent solution of silver nitrate applied on a small swab to the bleeding surface and held in position is usually quite effective At times it may be necessary to resort to the cautery, using the galvano-cautery, or heating the end of a probe in the flame and touching the bleeding point Such cauterization is quite successful, but renewed hemorrhage may occur upon separation of the slough At times it may be necessary to plug the nostrils Certain internal remedies may be used in addition to the local treatment Of these remedies ergot is the best, and may be given in repeated small doses, by the mouth or hypodermically Gallic and tannic acid, acetate of lead, sulphuric acid as well as the astringent preparations of iron may also aid in checking the hemorrhages

Treatment to Prevent Recurrence—The patient should be strongly urged to avoid picking the nose, and to use warm washes and oils to remove crusts and accumulations of dust The surface of the ulcer should be coated over by applying copper sulphate, or silver nitrate, or a varnish of balsam of tolu dissolved in ether The local use of the ammoniated mercury ointment, one half strength, or carbolic acid (2 to 5 per cent) in albolene or cosmoline, and insufflations of acetanilid, or iodoform, with or without morphia, can be recommended

With such treatment I have usually had but slight difficulty in healing the ulcerations and preventing epistaxis If the patient can abstain absolutely from picking the nose, this treatment may be all that is necessary The desire to pick the nose clear from the deposits of crusts that will form around the septal deformity from time to time is, however, almost irresistible and in my experience the recurrence of the hemorrhage is almost invariable It is therefore my usual custom to advise operative procedure for cure of the existing septal deformity and thus remove the offending cause Removal of the projecting portion by means of the nasal saw, shave, gouge, etc , is usually all that is necessary If the deviation is very marked, or if the hemorrhages come from the concavity of the deflection, it is advisable to fracture the septum and restore it to a normal position The permanent relief from epistaxis that I have invariably succeeded in obtaining from the performance of these slight operations has led me to strongly recommend such procedure, even when the hemorrhage is slight and of comparatively infrequent occurrence

1929 Chestnut Street

DISCUSSION

Dr J E H Nichols, of New York—The percentage of cases showing chronic atrophic rhinitis seems to me rather small as in my experience I have found it very large We almost always find the atrophic condition present with deviations of the septum, because of the patency of this non-occluded nostril Facial movements often cause hemorrhages by reason of the patient's effort to dislodge the crust formed in the vestibule and relieve himself of the feeling of tension caused by the dryness I have seen hemorrhages start from this cause A case under my observation at the Manhattan Eye and Ear Hospital exhibited this, she had been under treatment for two months at the Roosevelt Hospital for systematic causes, the atrophic condition being entirely overlooked Treatment directed to softening the membrane relieved the hemorrhages, and she has had none for four months I use largely an ointment called the unguentum nasalis which is of 10 per cent ichthyol and 5 per cent, eucalyptol in vaselin This is used twice or three times a day

Dr Woolen—said nose picking was not a habit and a bismuth vaselin salve applied at night stimulated healthful secretions and ease of cleansing and therefore, freedom of accumulation of irritating causes After all, in controlling hemorrhage, the formation of clot is the matter of prime importance, and this is most admirably secured by insuflating dermatol, and inserting a film of cotton along the inferior meatus, as foundation for clot, dermatol being both an hemostatic and antiseptic

Dr Loeb—I desire to call attention to perforation of the septum as a cause of recurring epistaxis A patient came under my observation who presented a large perforation of the septum and who suffered greatly from recurring nasal hemorrhages and from headache Treatment bearing upon a coincident cardiac condition had been used for some time by a practitioner in the hope of cure The use of nitrate of silver and oily spray entirely relieved her Another case presented a very sharp projection which forced its way through the mucous membrane upon exertion and after piercing the nose Removal of the spur entirely cured the condition

Dr Howard S Straight of Cleveland—The importance of very careful examination of the cartilaginous septum in all cases of frequently recurring nasal hemorrhage has been impressed on me during the last year I believe a slight ulceration of the mucous membrane the cause of the hemorrhage is often overlooked The connection between a slight devition of the septum and the ulceration of the triangular cartilage has not impressed me as of so great importance as expressed in the paper The writer has done the Section a favor in calling especial attention to this condition of affairs Just what importance to attach in a nasal disease of any form to a slight deviation of the septum, is a question in my mind To assume that the deviation accounts for everything is easy but just where to draw the line, the gods only know

Dr Van Sant, closing discussion—In regard to atrophic rhinitis being a frequent cause of habitual epistaxis, my experience does not agree with that of Dr Nichol It is true that the removal of an adherent crust in atrophic rhinitis may cause a few drops of blood, but this is so slight that I have not included such cases in my paper Dr Loeb considers perforation of the septum as a frequent cause Perforations have usually been found to be preceded and caused by chronic ulceration, indeed after the perforation occurs, the hemorrhages may cease although ulceration around the margins of a perforation may continue the epistaxis In such cases the best treatment is to heal the ulceration before perforation takes place In regard to the use of salves, nitrate of silver, etc, used by Dr Woolen I have already said such means will usually heal the ulceration and if the patient will absolutely abstain from picking the nose the epistaxis may permanently cease Unfortunately the temptation to remove crusts where there is a slight septal deformity is usually too great for the patient to resist In replying to Dr Straight I think that operations for the removal of any existing deformity should be advised upon the ground of securing more permanent relief If by operation we remove the projecting part from the septum, dust and crusts will not accumulate The temptation to pick the nose is lessened and the septum is less liable to injury and subsequent ulceration

REPORT OF A CASE OF CARIES OF THE SPHENOID BONE

Read in the Section on Laryngology and Otology, at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md, May 7-10, 1895

BY EWING W DAY, M D

PITTSBURG, PA

That caries of the bones at the base of the skull is rare, is, I think evident from the scarcity of literature on the subject I have been able to find but scant reference to the subject from the resources at hand For this reason I have ventured to come before you with the report of a single case of sphenoidal caries Its course was chronic, lasting for two and a half years Its beginning was obscure, for during the first year and a half, though seen by many of the most prominent members of our profession, no definite diagnosis was made, but the cause was assigned to malnutrition and neuralgia of malarial origin That the bone itself was first involved seems to me certain, for when the membrane over the sphenoid broke down, the carious process was already fully established The resulting cerebral abscess demonstrated at the post-mortem, probably dated from the time of the extreme and continuous headaches, and though the optic nerve was exposed to pressure, and pus was present in the cavity of the orbit, the eye, while frequently examined by Dr Willetts, never gave evidence of it, on account of the drainage into the nasopharynx through the sinuses in the bones

In the spring of 1892 I was asked by the attending physicians, Drs Emmerling and Anderson, to examine the patient, who in addition to a marked general debility and a train of obscure and indefinite symptoms, complained of soreness and pain in the pharyngeal vault

The patient, aged 55 years, was a prominent physician of Western Pennsylvania, with the following history in 1884, while operating on a patient supposed to be syphilitic, for hemorrhoids, he accidentally cut his finger, which, though promptly treated, was in the hurry incident to the operation, not cauterized In a few days a severe case of blood poisoning resulted, but no symptoms of syphilitic infection were apparent Later, the question arose as to whether there might not also have been a specific inoculation at this point His recovery was slow and his physical condition was never as it had been before the attack

Seven years after, in 1891, he showed signs of physical decline, although he continued his labors as lecturer and operator at the medical college and hospital but his efforts lacked that spontaneity so characteristic of him He spent that spring and summer in Europe and suffered so severely from frontal headache, that often it was impossible for him to carry out his plans At times he would weep like a child and was generally depressed and very homesick The principal physical symptom of which he complained at this time was a feeling of extreme chilliness After his return home he seemed to improve and went about his work with some of his old-time vigor, but that fall, symptoms of nasal rhinitis developed and he frequently sprayed his nose with a hand atomizer During the winter he had a severe attack of influenza which left him weaker than ever with severe frontal headache and more aggravated nasal rhinitis After this sickness his health always varied malnutrition progressed and the nasal affection and frontal headache continued At times he would complain of a lame hand, the result of the blood poisoning During the spring of 1892 his debility frequently obliged him to rest and no amount of medicine and care altered his condition He however, attended the meeting of the American Surgical Association at Boston, and consulted several physicians both there and in New York, whose diagnosis was neuralgia and malnutrition of a probable malarial origin Later, he went to the Cheat Mountains in hopes that the outing would restore his health As the warm weather approached, his work became more laborious to him and frequently he would remain in bed and refuse to see patients

At this time, when I first saw him, an examination of the nose and naso pharynx had not been made, medication being directed toward stimulating the appetite and overcoming the indigestion and nausea which had been prominent symptoms At times he seemed feverish, but never to a marked degree The pulse was always good An examination showed the vault of the pharynx swollen and inflamed, the mucous membrane having a superficially eroded appearance as if denuded of its epithelial layer There was marked chronic rhinitis, with stenosis, from distension of the venous plexus of the lower turbinates From this time on I saw the patient nearly every day up to the time of his death A short time after this while making an examination, a small carious area, at the spheno-vomer articulation was found, a piece of bone the size of a pea was removed with the adenoid forceps, and a diagnosis of caries of the sphenoid made

A consultation of physicians now held, resulted in the conclusion that his ailment was syphilis contracted at the time of the blood poisoning, the possibility of tuberculosis being excluded by a microscopic examination of the discharges He next took a trip East and consulted Drs Janeway, Gouley, Bryant and several others, concerning the probability of syphilis, without receiving any definite opinion

Mercurial treatment was persevered in unremittingly, and iodids, though thoroughly tested, were without effect, as he possessed an intolerance for them In September, tinnitus aurium, accompanied by severe pains in the right ear developed, though there was no change apparent in the tympanum, and there was also pain in the right frontal sinus This pain was so severe and persistent that the patient insisted there must be suppuration An examination proved it to be healthy, but foul pus was being discharged from the sphenoid and the region of the ethmoid and it was evident that caries was progressing rapidly

The swelling of the naso pharyngeal wall and the extreme sensitiveness of the throat rendered a full rhinoscopic view difficult, but an area of diseased bone 2 c m in length by 1 c m in breadth could be seen and it was evident that the body of the sphenoid and basilar process of the occipital bone were disintegrating At different times a quantity of carious bone was removed through the nostrils, with an instrument devised for that purpose, with no appreciable benefit Frequent cleansing of the nostrils and throat now became necessary to remove the pus which was abundant Through the winter of 1892 he became very feeble and occasionally morphin was necessary to relieve the pain On Jan 24, 1893, he was induced to take a trip to Florida in the hope that the outdoor life might improve his condition Dr Emmerling accompanied him and they stopped at Baltimore to see Drs Osler and Halsted, who gave the opinion that he was suffering from necrosis of the base of the skull, and thought that an operation, while doubtful might be of benefit, and that a trip South would improve his physical condition

During the first two weeks in Florida the patient improved markedly, the pus became greatly diminished and he could spend the whole day fishing He ate well and was able to walk long distances On a change of the weather, however, he contracted a slight cold and steadily declined in strength, suffering severe pains and having some symptoms of abscess of the brain He was brought home on April 1, very weak, appetite bad, constant headache, twitching of the left trapezius and muscles of the back of the neck, with sensory disturbances of the face The lymphatic glands on the left side, at the angle of the jaw had suppurated and were lanced, the resulting wound was exceedingly indolent, nearly closing at one time The caries had progressed steadily and there were sinuses in the sphenoid and basilar process that admitted the entrance of a small probe for 3 or 4 mm The pus was more abundant in the pharynx This flow was freer at times, giving relief from the pain for a few hours Ordinarily one-third of a grain of morphin was necessary twice daily Finally, the bladder became inflamed and catheterization was required To help the headache, frequent applications of the faradic current were made During this decline, his faculties were preserved to the last, the only mental aberrations being wild dreams under morphin

May 28, he was taking one third grain of morphin, two or three times a day, refused food on account of nausea when it was brought to him, and always vomited when lying on left side The gland that had suppurated now exhibited the character of a fungating ulcer and a bed-sore over the sacral spine was very painful and difficult to heal His eyes had a slightly crossed appearance, but he never complained of a diplopia

June 2, the bed sore was nearly healed, but the cystitis was much aggravated and regular catheterization was necessary A proctitis had also developed from use of the rectum for alimentation yet at this period he could walk to the lounge to have his nostrils cleaned or examined During the next ten days he failed much, until the early morning of June 13, when he was found trying to vomit and on questioning what had happened, he said the pus was running down his throat, some of it ran from the nose and he expectorated about an ounce His voice was peculiarly cavernous, having a nasal ring He was mentally clear for a time and had less pain, but was very pallid and the respirations increased Gradually he became comatose and died in a few hours

Post mortem —The head only was examined On removing the calvarium, which was not thicker than the average, the dura was found very adherent, especially to the frontal bones The adhesion was not uniform but in spots, elsewhere it was soft, thick and easily detached A pachymeningitis with passive congestion, was exhibited over the frontal and temporo-sphenoidal lobes of the brain On dividing the dura and falx cerebri transversely, the pia and arachnoid were found to be hyperemic on both sides with considerable edema of the right side Stripping the dura forward it was found adherent to the anterior pole of the cerebrum, by a lepto meningitis The left hemisphere was congested, but its consistency and color were normal, while the right was soft, putty-like and nearly diffluent As the brain was lifted out of the fossæ the adhesion of the membranes to the frontal, and temporo sphenoidal lobes was seen, and an abscess cavity springing from the center of the right wing of the sphenoid entered the temporo sphenoidal lobe This abscess had dissected its way between the dura and the sphenoid back of the middle lacerated foramen, up over the petrous portion of the temporal bone as far back as the internal auditory meatus This abscess, which was of the size of a walnut, traced medially, dipped beneath the structures which passed through the foramen rotundum and pierced the base of the right wing of the sphenoid, entering the sphenoidal and spheno ethmoidal cells into the naval cavity The walls of this abscess in the brain were soft, without any resemblance to brain matter and the entire hemisphere was exceedingly soft

By dividing the lesser wings of the sphenoid, the orbital and nasal cavities were exposed from above, pus was present in the orbit and it was found that a sinus led from the right side into the orbital cavity and connected with the anterior ethmoidal cells, and the abscess of the brain The entire body of the sphenoid and basilar process of the occipital bone were riddled with sinuses, exposing the external surface of the dura and leaving it as the only protection and support of that part of the base of the brain resting on the clivus blumenbachii The pterygoid processes and ascending rami of the palatine bones were carious and loose The vomer was entirely gone, as also the perpendicular plate of the ethmoid The cribriform plate of the ethmoid, the turbinated bones and lesser wings of the sphenoid were intact Both antrums, the frontal sinuses and the turbinates were free from disease, while the post-pharyngeal wall was intensely congested and thickened to the extent of half an inch, nearly closing the isthmus of the naso-pharynx This thickening of the mucous membrane also extended to the sides of the nasopharynx, closing or obstructing the Eustachian tubes The abscess and excavated bony base at the floor of the brain brought vital parts into great danger The carotids, cavernous sinuses, crura cerebri and other structures were within a few cells distance of infection

The pus that poured from the nose and into the throat on the morning when he died, came from this abscess of the brain and the consequent passive congestion and anemia of the brain was the *coup-de grace*

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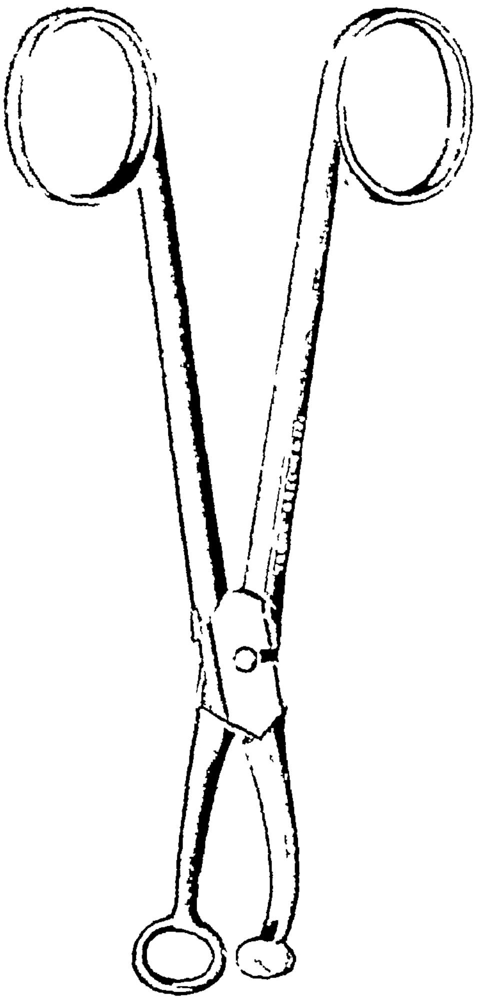
NEW SEPTUM FORCEPS

Read in the Section on Laryngology and Otology at the Forty-sixth Annual Meeting of the American Medical Association at Baltimore, Md, May 7-10 1895

BY A J ERWIN, M D

MANSFIELD OHIO

Having long felt the want of an implement for the correction of the deviated septum, I had these forceps made by Truax, Greene & Co, which I find to be very useful and convenient The male blade being 4 m m less in its diameter than the inside of the ring blade, it does not cut the cartilage while reversing its convexity, it produces at most, a kind of green stick fracture of the septal periphery, which makes it easy of support In most cases a hard pledget of cotton will keep it in place as required for a few days will keep it in place as required for a few days Sometimes you will find it better to use the pin One size, just as large again as this cut, will answer for every case, except for children, and they do not need it



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ON THE LOCAL AND GENERAL CONDITIONS THAT CHANGE CORNEAL CURVATURES

Read in the Section on Ophthalmology, at the Forty-sixth Annual Meeting of the American Medical Association Baltimore, Md, May 7 10 1895

BY LOUIS J LAUTENBACH, M D, PH D

PHILADELPHIA

Theoretically, astigmatism *may* be occasioned by any irregularity of curvature or of structure of any of the tissue layers of the eye lying in the course of the visual axis, but practically, it is usually lenticular or corneal in its origin and is an irregularity of curvature *and not of structure* Of these the corneal variety is by far the most common, while the lenticular form is rarely sufficiently prominent to interfere with vision

In this paper I will confine my attention to regular astigmatism developed in the cornea, and will but incidentally notice lenticular astigmatism Formerly, regular astigmatism was considered a congenital deformity, sufficiently fixed and definite to remain ever *in its original condition*, *excepting* when modified by some violence, traumatic or inflammatory exerted upon the cornea, or by some change in the lens substance from degeneration or injury Later, when the opinion began to be expressed that perhaps the astigmatism was a little more variable than had been supposed, these changes when admitted, were attributed to *alterations in the lens* substance or in its curvatures, from distorted or spasmodic action of the ciliary *muscle*

In my opinion, many and various are the causes of astigmatism and of its variation I will attempt to explain how normal astigmatism develops and the influences which determine its origin and extent, and will also attempt to show that while astigmatism is nearly always present congenitally, with its seat in the cornea, this corneal astigmatism is not by any means constant throughout life, its degree and axes being subject to variations These variations may be many, frequent and even sudden, due to a great variety of causes, constitutional as well as local

Burnett[1] speaking of reported cases of progressive changes in the degree of astigmatism and in the direction of the principal meridian says "We can not positively exclude a change in corneal curvature, but it is most probable that the change is due to alteration in the shape of the lens, either from changes in its substance or from a modified action of the ciliary muscle"

Fuchs[2] says that, "The cause of regular astigmatism in the great *majority* of cases is a congenital irregularity of the curvature of the cornea" He also writes "Acquired astigmatism may have its cause in the cornea or in the lens The former *variety* occurs when the curvature of the cornea has been altered, either because of disease affecting it or still more frequently because of operations The lens gives rise to a regular astigmatism when it is obliquely placed, as for example, in subluxation"

Noyes[3] says that regular astigmatism "is chiefly dependent upon abnormal curve of lens or want of homogeneousness in the lens" He acknowledged that "some rare cases of astigmatism are acquired, but as a rule the regular astigmatism of the cornea is congenital Acquired astigmatism in the cornea when no opacity exists, comes from conicity of the membrane or happens after tenotomy of the muscles, or after wounds of the cornea, iridectomy and extraction of cataract "

Schmidt-Rimpler[4] writes of regular astigmatism as follows "As a rule, the affection is congenital It is found occasionally in corneal opacity," and " from ulcerations and ectasiæ, particularly keratoconus It is especially frequent after cataract operation and may also occur after iridectomy "

A theory extensively advocated in the past, is expressed by Javal[5] as follows " The meridian of greatest refraction corresponds to the shortest diameter of the skull " This theory places the burden of the formation of astigmatism entirely upon the development of the osseous structures and when these are fixed, no change of astigmatism can occur save from injury or disease

Corneal curvature, and, consequently, corneal astigmatism when present, is the result of a number of forces more or less antagonistic, exerting their powers upon the corneal texture The cornea, a dense elastic tissue, is inserted as a watch glass in the front of a softer spherical body, the eyeball which in turn rests upon a cushion of fat, being held in position by the recti and oblique muscles, aided by the orbicularis palpebrarum and, to some extent, by the optic nerve and orbital tissues The sphere is made sufficiently tense to retain its normal shape by the rigidity of its walls, the pressure of its semi fluid contents, and a resistance and muscular plane situated immediately posterior to the insertion of the cornea—I refer to the iris and ciliary body with the lens and its capsule The corneal structure being denser than any other part of the sphere's walls, offers more resistance to pressure changes

The pre-natal cornea is subjected to pressure from within and without The corneal surface is the result of these opposing forces The pressure from within the eye, during the period of growth, stretches the tissues of the eyeball in all directions In consequence of this, the cornea being the densest and most rigid portion thereof, is subject to the least change in curvature, but having the radii of its curves increased, the support of the recti muscles and of the orbicularis still further opposes this flattening, the oblique muscles and to a limited extent the levator palpebræ aiding it Among the other influences working at this time, is the resistance offered laterally and posteriorly, to the growth of the ball and to the play of the various forces indicated, by the walls and contents of the orbital cavity If the equatorial resistance of the orbit be greater than normal, the corneal curvatures will in consequence be increased, while, *vice versa*, if too much pressure be exerted from behind the eyeball, they will be decreased and the cornea flattened The corneal curvatures at birth are but the resultants of these conflicting forces, and through life these same factors play even as important a part in the retention or in the alteration of its curves, except that the forces applied are apt to be more irregular in their action, while the cornea having become fairly rigid and having assumed a more fixed and definite form, more strenuously opposes changes of all kinds, whether applied from within or from without the globe All forms and varieties of astigmatism are the direct result of the action of these various influences and from the degree and axis of the astigmatism, we can, by careful study determine the exact location of the supra- and subnormal forces

Presuming that the corneal resistance remains constant, if the internal pressure be above normal, the corneal curvatures become more flattened This flattening is usually more marked in the vertical meridian, as in this meridian the recti muscles normally offer the least resistance, and the orbicularis palpebrarum being at the same time by the increased bulging forward of the eyeball, thrown into a position to exert less than the normal pressure In conditions where the intra-ocular pressure is diminished, exactly the opposite conditions result, the corneal curvatures increase—the vertical meridian becoming usually the more convex—the orbicularis again playing an important part in this change

If the orbicularis is more than usually powerful, or too active, the vertical meridian becomes more markedly curved than usual, if this muscle be too weak, it is lessened If the levator palpebræ are unusually developed, the vertical meridian is prone to become flattened If the vertical recti muscles are more developed than usual, the normal astigmatism of an eye, namely, astigmatism with the rule, in which the curve in the vertical meridian is greater than in the horizontal, is apt to be increased, whereas if there is a want of development or any weakness in these muscles, the vertical meridian becomes more flattened If the horizontal external pressure on the eye be greater than normal, if one or both the lateral recti muscles be too strong or in a spasmodic state, the curve in the horizontal meridian is increased, and if they be either weakened or paralyzed this curvature will be diminished The effect of the oblique muscles is to twist the principal meridians away from their usual horizontal and vertical positions and to flatten all the curvatures, especially those near the horizontal meridian

To more thoroughly appreciate corneal changes as affected by the recti muscles, a study of their insertions may prove valuable Beginning with the weakest of the recti, the superior, it is inserted[6] 3 3-5''' behind the cornea with its inner end 1''' nearer the cornea than the outer, while the inferior is inserted 3''' behind the cornea, ½''' inward from the end of the vertical meridian and with its inner end 1''' nearer the cornea than the outer, while the inner, the thickest of the straight muscles, is inserted 2''' back of the cornea, and the outer,[7] the strongest and longest, is inserted 3½''' back of it These individual peculiarities of length, strength, and especially of the insertion of these muscles prove interesting, not only as regards the relative weakness of the vertical recti, as instanced in the fact that both these recti are smaller and their insertions farther removed from the cornea than the horizontal, but also in the study of the origin and development of the not infrequent cases of astigmatism in axes not exactly corresponding to the horizontal and vertical

The actions of the recti muscles, I have illustrated by constructing a series of small rubber balls having white varnished surfaces, with tapes glued to them to represent the muscles, and then drawing the various tapes with different degrees of strength, measuring the changes in curvature by means of the ophthalmometer I used the same means to illustrate the changes produced by increased intra ocular pressure with the expected result, and constructed artificial eyelids on these balls, and by the observations confirmed the theoretic consideration Another method which I employed to illustrate the same subject was by mounting the eyes of hogs and pigs in the guillotine of the ophthalmometer and then producing contraction of the muscles and measuring the corneal radii This series of experiments, while entirely confirmatory of the results above given, are not yet in such shape as to allow of a full tabulated report

To illustrate the action of the lids—the orbicularis palpebrarum and the relation of its actions to that of the recti muscles—I have constructed two rods of equal length one to represent the horizontal meridian, the other the vertical On the first, you see weights suspended from each end These weights represent the pulling effect of the recti muscles On the other rod, you observe the end weights are smaller, and sliding up and down these rods are two extra weights which you will observe I have so arranged that I can add to, or subtract from, as necessary The end weights represent the pulling force exerted on the cornea by the vertical muscles, while the sliding weights represent the variable pressure as exerted by the lids—the orbicularis as opposed by the levator palpebræ The nearer the center of the cornea this muscle exerts its influence, the greater its power, so as I move this weight toward the axis on which I have the rod suspended, the more weights do I place upon it, and the farther I remove this slide from the center, the more weight do I remove from it This will illustrate the conditions which prevail in all eyes subjected either to extra intra-ocular pressure or extra post-ocular pressure, or in affections involving the orbicularis muscles As the pressure increases, the lids are thrown back from the eye away from the corneal pole, and this muscle is placed at a disadvantage and is not able to exert its full muscular influence Extra action of the levator palpebræ brings about the same condition

The value of these actions being seen in the determination of the radii of curvature and the production of the principal meridians of the cornea, variations from the normal can in each individual case be explained by a consideration of the conditions present, as contrasted with those normally found As before mentioned, increased intra-ocular pressure as well as increased post-ocular pressure, occasions a flattening of the curves, whereas if either of these be below normal it will result in an increase in the curvature in the first—the vertical meridian is apt to be the more flattened—and the latter more curved, whereas any increase of pressure either lateral, from the orbital walls, or, as exerted by the muscles, or from in the front, by the lids, results in an increased curvature, the meridian of greatest increase being in the line of greatest force

While normal corneæ are under the influence of these antagonistic muscular and other forces, they usually show little or no sign of curvature changes, but when a change of this kind does occur without any definite and distinct cause, it is very slight, slow and regular, and is almost always an increase in the curvature of the vertical meridian as contrasted with the horizontal This relative increase in the curvature of the vertical meridian may be considered as normal; it seems to be occasioned by a gradual giving way in this meridian, due to the constant slight excess of pressure of the vertical recti, plus the lids over the lateral recti, and to the slight weakness of the internal rectus so often produced in modern life by the intellectual pursuits, overtaxing the lateral muscles, and possibly to some extent leading to a gradual change in the ciliary muscle from over-use

In the case of abnormal corneæ where the corneal tissues are below par, either from local inflammations, from interference with the nutritive supply from pressure, or from constitutional diseases, these corneal disturbances are not slight, slow and regular, but are often sudden and violent, the curvature and axes often varying as one or the other of the muscles or series of muscles is brought into action

We can then for convenience arbitrarily arrange non-inflammatory changes in corneal curvature into two classes

1 Those occurring in well nourished normal corneæ where the changes of radii or axes or both are slow, regular, but progressive, and

2 Those occurring in corneæ poorly nourished where the changes are rapid, irregular and variable

Since reading a paper on corneal curvature[8] before the Philadelphia County Medical Society in June of last year, I have been pursuing the subject in both a clinical and experimental manner My clinical work has served but to accentuate the results therein expressed, while the experimental work so far as it has gone, confirms the clinical observations In studying the cases clinically, I rely mainly on my ophthalmometer, but to some extent on skiascopy and the subjective testing with glasses with the accommodation paralyzed

Considering the latter method first, I have found that in cases of suspected variability in corneal astigmatism, suspected because the ophthalmometric measurements indicated it, that the testing of the refraction almost invariably showed absence of marked improvement of remote vision, and that the principal axes were either not clearly defined, or perhaps not at the ordinary intervals of 90°, the results being uncertain, both as to the axes and the amount of vision obtained These results appeared not only after the thorough use of homatropin according to the method indicated below,* but even after the thorough and persistent use of atropia In these cases the skiascopic observations gave similar results as to the uncertainty of the axes and in the amount of astigmatism

My method of using the Javal-Schiotz ophthalmometer I have already indicated in a paper[9] read before the Pan-American Medical Congress in May, 1893 I use electric lights as illuminators and thus have practically the same illumination present in each case The instrument is placed on a firm non-vibrating stand The patient seats himself before the instrument, his feet resting firmly upon the floor with his arms upon the table He then places his chin upon the sliding rest, which is raised or lowered so as to bring the eyes to the proper height and on an absolute level Having attended to these details, the head is strapped firmly to the head rest The patient is directed to look at a 5 mm square placed upon the center of the field glass of the telescope, and the instrument is adjusted so that the exact center of the field is occupied by the mires in apposition In some cases, a want of accuracy is occasioned by the drying of the cornea while under observation, which I obviate by the use of a weak solution of salt,

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* In ordering homatropin, I always give a printed prescription as below, and ask that the directions be carefully observed, using five doses of the drops in the evening and five in the morning, the examination taking place after the last instillation

R Homatropin hydrobrom gr s s
Aqua rosa m xv
M Sig Eye drops One drop in the outer corner of each eye every half hour for two hours in the evening, and every twenty minutes the succeeding morning

again the same difficulty is caused by profuse conjunctival discharges which is overcome by using castor oil in the conjunctival sac, rubbing thoroughly over the cornea

My ophthalmometric observations have been made on over 3,000 eyes, and my attention was early called to the fact that corneal meridians and their axes were by no means constant Not only did I observe them sometimes to vary from day to day, or from week to week, but also that these changes would occur during the course of a few seconds I have found the corneal astigmatism to change from 2 to 3 dioptres in from eight to ten seconds, and the axes as much as 25° during the same period, this occurring in corneæ not inflamed and not associated with any eye inflammation

(See reference 8) (Case 1 illustrates these violent changes)

Laqueur[10] made the same observation, although he did not record such extreme cases as I have noted I have invariably found these quick and instantaneous changes associated with depraved conditions of the general system, having observed it in advanced cases of syphilis, in the scrofulous and the tubercular, in those subject to gout and rheumatism, especially the latter, after scarlet fever, diphtheria, typhoid fever and pneumonia and in those suffering from chronic diarrhea and exophthalmic goitre Noyes writes "It is not rare to discover, as Laqueur pointed out, that the curve of the cornea is not constant It sometimes changes as we look at it, we note the images approach or separate instead of remaining still" Continuing "They exhibit these oscillations under the action of the lids, and also if the upper lid is lifted off the globe, under the action of the motor muscles Drawing on the lids at the outer angle will increase the corneal curves greatly" Laqueur[10] observed that the traction on the upper lid, whether toward the temple or the nose, occasionally produced flattening of the horizontal meridian and increased curvature of the vertical meridian by pressure on the globe, so that regular astigmatism of from 2 to 4 D developed

I early observed that the corneal measurements were sometimes altered after the accommodation had been paralyzed After noting this phenomenon a number of times, I made a series of experiments 1, taking corneæ whose meridians remained constant from day to day, I would paralyze the accommodation and while, often without any appreciable effect, when any change was occasioned it was usually of a decrease in the corneal curves with, often, an increased development of astigmatism if with the rule, and a diminution when against the rule (Case 2 illustrates the experiment)

It would seem from these observations that the ciliary muscle is one of the factors in the determination of the corneal curves

The second series of experiments consisted in taking corneæ with constant curves and, while measuring them on the ophthalmometer, throwing a pencil of light on the eyes, I found that changes in the meridian frequently occurred and that these changes were usually in the nature of an increased curvature with, often, a lessening of a degree of astigmatism when with the rule, and an increase of it when against the rule (Case 3 illustrates the experiment)

So far as I know, this theory of the action of the ciliary muscle in modifying corneal curvatures is opposed to the views of all who have written on the subject, and yet these observations were so frequently and accurately made that I am sure some modification of the corneal curves must be attributed to the action of this muscle The ciliary muscle serves, no doubt, as a muscular framework to support the eyeball immediately posterior to the cornea, when the muscle is in use it acts as a drawing string within the ball, constricting it anteriorly In paralysis of the accommodation, the internal muscular force being removed, the corneal elasticity and the eye tension serve to increase the corneal radii If the accommodative paralysis be long continued, the vertical meridian gives way proportionately more and more, as the lid pressure is gradually removed a greater distance from the corneal pole

As previously indicated, corneal changes are of two kinds It is in sound corneæ subjected to unequal pressure, that we find the first class of changes before mentioned—slow, irregular and progressive variations in corneal astigmatism In unhealthy corneæ we have our second class of changes—that of the irregular, rapid and variable A practical fact of some importance is that in this latter class of cases the symptoms of poor vision, head pains, vertigo and sick stomach are often extremely severe and can only be relieved by putting the cornea at rest, which is most readily accomplished by absolutely paralyzing the accommodation, in this way preventing the use of the external muscles with their consequent constant disturbance of the cornea The monocular double vision occasionally observed, is undoubtedly in a not inconsiderable number of cases, thus produced

According to Dobrowolsky[1] the irregular contraction of the fibers of the ciliary muscle changes the refraction of the eye by its influence on the curvature of the lens, while Wallace[13] speaking of the Javal ophthalmometer says "That variations of accommodation in the patient's eye do not modify the degree of astigmatism The curvature of the corneal meridians remains the same during active accommodation as during the passive state" Burnett[14] also seems to consider the ciliary muscle as exercising no effect on the cornea, as he says "The accommodation in its entirety can not affect the amount of astigmatism, though it greatly modifies its general character" It would seem however from the reports of Dobrowolsky, Javal[15] and others that "there can be a partial contraction of the muscle of accommodation, producing a lenticular astigmatism, the effect of which would be either to create a new, or increase an existing astigmatism, or to a greater or less extent, to neutralize that of the cornea"

I hope I have shown how such an apparently slight influence as the contraction or paralysis of the ciliary muscle may influence corneal curvature, and consequently its astigmatism, so I will refer more briefly to the greater influences that govern its meridians I will premise by asserting that corneæ are influenced, all other things being equal, in proportion as their development has been deficient, or their nutrition insufficient Well developed and healthy corneæ of thoroughly healthy and robust patients are, according to my observations, rarely affected by any but the most marked and violent local disturbances, whereas corneæ deficient in resisting quality, either as the result of a previous inflammation or of an existing disturbance, and the corneæ of those suffering from constitutional dyscrasia, of those convalescent from acute febrile diseases, and of those who have been subject to the ravages of prolonged chronic disorders, are affected by the slightest local derangement—the least want of that exact balance of the various forces that so thoroughly control the shape and motion of the eyeball, whether this be an increase or decrease of orbital contents, or some variation in the tonicity of the eye muscles, some difference in the amount of pressure exerted upon the ball by the lids, some variation in the strength of the ciliary trestlework, or some change of pressure within the ball In short, any change of pressure within or without the eye, may and often does alter the corneal meridians, always does so in weak corneæ, and if the want of balance be sufficiently long continued, will do so in sound healthy corneæ

In dealing with wounds of the corneal tissues, it can be easily understood how any abrasion or injury of any kind, affecting the deeper layers, can be readily followed by a change of corneal curvature If the wound be sufficiently extensive or near the pole, its effect upon the visual region of the cornea will be considerable and give rise to a marked disturbance of the corneal meridians We all expect to have marked corneal changes develop after an iridectomy or a cataract extraction We often find the astigmatism after a cataract extraction to be increased 10 to 16 D or more, the meridian of least curvature being at right angles to the line of incision As cicatrization and absorption advance, the astigmatism gradually diminishes until it approaches the normal (Case 1 illustrates this)

Corneal inflammation involving the fibrous and elastic layers is always followed by changes in corneal curvature these changes depending upon the extent and depth of the inflammation, and its practical importance to its proximity to the visual line Staphylomata show, in an exaggerated degree, the effects of the intra ocular and external muscular pressure on a weakened corneal texture—the staphylomata being the result of these antagonistic forces

My experience after advancement and section of the recti muscles has been to find a marked change in the corneal astigmatism In advancement, the meridian corresponding to the plane of the advanced muscle has its radius diminished on account of the increased tension thereon exerted, while the opposite meridian is occasionally flattened In tenotomy, the meridian in the plane of the muscle operated upon is flattened, while the opposite meridian is often more curved Noyes[16] calls attention to this acquired astigmatism of the cornea, following tenotomy of the muscles

Pterygii occasion irregular flattening of the meridian of their growth which increases as it advances and which usually subside if the pterygium is removed sufficiently early (Case 5 is an illustration) Noyes[17] gives us a practical lesson when he writes "I have formerly been indisposed to remove pterygium until it made appreciable advances toward the region of the pupil, but having noticed that under its influence astigmatism arises, I now remove it when not more than 2 millimeters beyond the limbus "

As illustrating the changes of the corneal curvatures from pressure exerted within the eyeball, I will for a moment direct your attention to the well known changes occurring in the course of glaucoma The importance of these observations consists in the fact that in fully three fourths of the cases of the disease there is a prodromal stage lasting often for months and even years, and that if the corneal curvature change, presenting itself in this stage be recognized, (and it is among the earliest of symptoms) the seriousness of the disease is often averted As a glaucomatous attack begins to cause increase of pressure within the eyeball, it not only presses all the structures in an outward direction, but by reason of this very pressure interferes with the corneal nutrition The corneal images as seen by the ophthalmometer, become more or less indistinct and later quite hazy, and the curvature of the principal meridians change, the horizontal becoming more curved and the vertical more flattened, while often the axes assume new relations to each other, not remaining 90° apart As the disease advances, the changes become gradually greater until often there is developed a change of as much as 3 or 4 D , the astigmatism developing against the rule (Cases 6 and 7 show this change)

The same change is observed in glioma of the retina, sarcoma of the choroid, and sometimes follows vitreous inflammation and hemorrhage into the retina I have observed the same change in some cases of exophthalmic goitre (Case 8)

As illustrating changes occasioned by variations in the capacity of the orbit, I have observed in some cases, when corpulence was increased, a change in the corneal curvatures, which disappeared after the excess of fat deposited in the orbit had been absorbed Orbital tumors, such as exostoses, fibromata, sarcomata, lipomata, myxomata, melonomata, cysts, etc , have a tendency to alter corneal curvatures, their influence being most observed in the meridian of greatest pressure, their effect upon the cornea being entirely dependent upon the lines of greatest increased force

In *conclusion, it may be said*

1 That regular astigmatism is always corneal or lenticular, but usually the former

2 That regular corneal astigmatism is the result of a variety of forces, acting upon the cornea, these forces being usually so accurately balanced as to result in the production of normal astigmatism, a low degree of astigmatism with the rule

3 That these forces consist not only of the muscles of the eye and of the lids, but that the orbital resistance, the intra-ocular pressure, and even the ciliary muscle are concerned, as well as the tonicity of the cornea

4 That anything that interferes in any way with the accurate balancing of these forces, results in the production of astigmatism, modified or altered in accordance with the excess or deficiency of the power exerted

5 That the inequality of forces, when long continued, affects healthy cornea, giving rise to slow, regular, progressive changes in the axes or degree of astigmatism or of both

6 That these unequal forces acting upon corneæ weak from local or constitutional causes, produce more rapid and violent, often instantaneous, changes in the axes or degree of astigmatism or of both

7 That any local condition that interferes with the texture or nutrition of the cornea predisposes to changes in corneal axes and curvatures

8 That any constitutional affection in any way modifying the general circulation and thus changing the corneal nutrient supply, predisposes to these changes

9 That any force acting unduly on the cornea should have its action modified as soon as possible

10 That corneæ under the influence of unequal forces, should be put at rest at the earliest possible moment

11 That corneæ weak from general or local conditions after being put at rest, should be promptly and efficiently treated in order to render them strong and healthy

12 That in many eye affections, a study of the corneal changes will serve to shed light on otherwise obscure conditions

13 That by carefully studying these corneal curvature changes in connection with the kind, degree and axis of astigmatism, indications for the treatment of the eye muscles will be obtained that were otherwise impossible

Case 1 —Illustrating sudden changes in amount of corneal astigmatism and in the axes of curvature Miss N B, aged 21 years, pale, poorly nourished, blonde, of a scrofulous type, was first examined by me July 7, 1893 V R R E, 6–15, L E, 6–60 Ophthalmometer, R E, images hazy, indistinct, axes variable above and below 90° Astigmatism amount varying from 0 25 to 0 75 D L E, hazy indistinct, axes variable, 15° above and below 38° and 120°, amount varying from 1.25 D to 3 50 D Re-examined July 11, 1893 R E, axes variable to either side of 80° and 170° amount varying from 0 25 to 0 75 D L E, axes variable, 15° above and below 30° and 120°, quantity from 1.25 to 3 50 D The axes and amount continued to vary, gradually the extent and rapidity of variable becoming lessened as the girl's health improved under the influence of rest, tonics codliver oil and mercury Examination Oct 1 1893 indicated that the axes and curves were fixed, the ophthalmometric record being

R E, ax	90°,	amount 1–6 D,	corneal	radius	7 7½ m m
" ax	180°,	"	"	"	7 7⅔ "
L E, ax	125°,	" 1½ D,	"	"	7 5⅓ "
" ax	35°,	"	"	"	7 7⅞ "

Refraction under atropin, Oct 14, 1893, was found to be

R E, sp — 0 50 D ⊃ cyl — 0 75 D, ax 180°
L E, sp — 0 75 D ⊃ cyl — 1.25 D, ax 90°

The glasses ordered and which have given perfect satisfaction up to the present were, R E cyl — 0 75 D ax. 180° = 6–9, L E, cyl — 1 25 D, ax 90° = 6–9

Case 2 —Illustrating the effect of paralysis of the ciliary muscle on the curvatures of normal cornea Miss E W, aged 7 years R V R E, 6–30 L E, 6–30 Measured upon ophthalmometer gave the following measurements at three different examinations images clear and distinct, no varying in the axes or amount of corneal astigmatism Last examination, July 7, 1895

R E, ax 95°, amount corneal astigmatism 3⅓ D, corneal radius, 8 4⅓ m m, ax 5°, amount corneal astigmatism, 3⅓ D, corneal radius, 7 8⅛ m m

L E, ax 85°, amount corneal astigmatism, 3¼ D, corneal radius, 8 5¼ m m, ax 170° 3¼ D, corneal radius, 7 9½ m m

When examined Sept 9, 1895, under mydriasis complete, gave the following records

R E ax 95°, amount corneal astigmatism, 3 + D, corneal radius, 8 4⅓ m m, ax 5° corneal astigmatism, 3 + D, corneal radius, 7 8⅙ m m

L E, ax 85 D, amount of corneal astigmatism 4¼ D, corneal radius 8 6 m m, ax 175°, amount of corneal astigmatism 4¼ D, corneal radius 7 8⅓ + m m

As refracted by glasses the same day, the following result was obtained

R E, sp + 4 00 D, cyl + 3 00 D, ax 90°
L E sp + 4 00 D, cyl, + 4.00 D, ax 90°

Case 3 —Illustrating the effect of accommodation on the curvature of normal corneæ Miss M S, aged 23 years Examined on three occasions with a constant result Last examination Sept 9, 1894 as follows

R E, ax 103°, amount astigmatism 2½ D, corneal radius 8 3 4–5 m m ax 13°, amount astigmatism 2½ D, corneal radius 7 9 m m

L E, ax 75°, amount astigmatism 2½ D, corneal radius 8 4 1–5 m m, ax 165°, amount astigmatism, 2½ D, corneal radius 8 0 2–3 m m

These observations changed to the following when the light of a 16-candle power incandescent globe was reflected on the eyes

R E, ax, 103°, amount corneal astigmatism 1¾ D, corneal radius 8 3 2–5 m m, ax 13°, amount corneal astigmatism 1¾ D, *corneal radius 7 9 + m m*

L E, ax 75°, amount corneal astigmatism 2 — D, corneal radius 8 3⅞ m m, ax 165°, amount corneal astigmatism 2 — D, corneal radius 8 0⅔ m m

Case 4 —Illustrates the effects of the operation of cataract extraction Mrs C L, aged 66 years Ophthalmometric measurement March 10, 1894, as follows

R E, ax 110°, amount corneal astigmatism 6 D, corneal radius 8 5 m m, ax 20°, amount corneal astigmatism 6 D, corneal radius 7 5 m m

Graefe extraction with iridectomy June 1, 1894 Measurements taken June 22, 1894

R E, ax 95°, amount corneal astigmatism 9 D, corneal radius 7 4⅔ m m, ax 10° amount corneal astigmatism 9 D, corneal radius 8 7¼ m m

Taken again April 26, 1895 Astigmatism much reduced

R E, ax 95°, amount corneal astigmatism 3 D, corneal radius 7 9⅔ m m, ax 20°, amount corneal astigmatism 3 D, corneal radius 8 3¾ m m

Case 5 —Illustrates the influence exerted on the corneal curves as well as the changes occasioned by its removal Mr P M, aged 50 years Pterygium L E, extending 2½ m m over cornea toward the pole from inner side

Ophthalmometer showed the following

L E ax 80°, amount corneal astigmatism 2½ D irregular, corneal radius 8 9⅛ m m, ax 170° amount corneal astigmatism 2½ D irregular corneal radius 8 3⅓ m m

Pterygium removed Feb 12, 1894 Reëxamined April 17, 1894, with the following result L E, ax 90°, amount corneal curvature 2 — D irregular, corneal radius 8 7½ m m, ax 180°, amount corneal curvature 2 — D irregular, corneal radius 8 3 m m

Cases 6 and 7 —Illustrating the change in corneal curvature accompanying glaucoma Case 6, Mrs W C W, aged 45 years Ophthalmometric measurements many, usually with a result such as observed Feb 10, 1893, which was as follows

R E, ax 90°, amount corneal astigmatism ¼ D, corneal radius 8 1½ m m, ax 180°, amount corneal astigmatism ¼ D, corneal radius 8 1+ m m

L E, ax 90°, amount corneal astigmatism ⅓ D, corneal radius 8 1½ m m, ax 180°, amount corneal astigmatism ¼ D, corneal radius 8 1 m m

Feb 28, 1893, she came with glaucomatous symptoms beginning with iritis, sluggish congested background with pulsation The measurements were as follows

R E ax 90° amount corneal astigmatism ⅓ D corneal radius 8 0½ m m, ax 180°, amount corneal astigmatism ⅓ D corneal radius 8 1 m m

L E, ax 90°, amount corneal astigmatism ¼ D corneal radius 8 0½ m m, ax 180°, amount corneal astigmatism ¼ D corneal radius 8 1 — m m

This attack was recovered from, but on Sept 5, 1893, she came to me with a yet more marked series of symptoms when the measurements were as follows

R E ax 90°, amount corneal astigmatism ½ + D, corneal radius 8 0 m m, ax 180° amount corneal astigmatism ½ + D corneal radius 8 + m m

L E ax 95° amount corneal astigmatism ¾ — D, corneal radius 8 0 m m, ax 180° amount corneal astigmatism ¾ — D corneal radius 8 1½ m m

When this attack was recovered from she resumed her normal measurements

Case 7 —Mr A G, aged 82 years Came to me during the

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[11] Noyes (See ref 3) p 125

[12] Dobrowolsky The Different Changes of the Astigmatism Under the Influence of the Accommodation Arch XIV 3

[13] De Schweinitz G E Diseases of the Eye p 169 1892

[14] Burnett (See ref 1) p 71

[15] Javal E Sur la Theorie de l Accomodat Compt Rend de la Soc Biolog 1862

[16] Noyes See ref 3, p 111 [17] Noyes See ref 3 p 370

opening of a glaucomatous attack Jan. 30, 1894, when the measurement was as follows:

L. E. ax. 85, amount corneal astigmatism ½ D., corneal radius 7.6[illegible] mm.

L. E. ax. 175, amount corneal astigmatism ½ D., corneal radius 7.5 mm.

The disease progressed rapidly; an operation was refused and the sight destroyed. The measurement taken March 30, 1894, was as follows:

L. E. ax. 80, amount corneal astigmatism 1 D., corneal radius 7.[illegible] mm.; ax. 175, amount corneal astigmatism 1 D., corneal radius 7.[illegible] mm.

By May 1, 1895, had increased as follows:

L. E. [illegible], amount corneal astigmatism 10 D., corneal radius 7.[illegible] mm.; [illegible]5, amount corneal astigmatism 10 D., corneal radius 8.0 mm.

Case [illegible].—Illustrating change in corneal curvature occurring in [illegible] of [illegible]. Miss M. B., aged 23 years. Examined at the first suggestion of the disease showed the following measurements Feb. 1, 1894:

R. E. ax. 8[illegible], amount corneal astigmatism [illegible], corneal radius 7.6[illegible] mm.; ax. 170, amount corneal astigmatism [illegible], corneal radius 7.5 mm.

L. E. ax. 6[illegible], amount corneal astigmatism [illegible], corneal radius 7.[illegible] mm.; ax. [illegible], amount corneal astigmatism [illegible], corneal radius 7.[illegible] mm.

Examined after its rapid development, April 7, 1895:

L. E. ax. [illegible], amount corneal astigmatism [illegible] D., corneal radius 7.[illegible] mm.; ax. 170, amount corneal astigmatism [illegible] D., corneal radius 7.6[illegible] mm.

L. E. ax. 95, amount corneal astigmatism [illegible] D., corneal radius 7.[illegible] mm.; ax. 180, amount corneal astigmatism [illegible] D., corneal radius 7.[illegible] mm.

172[illegible] Walnut Street.

SPINE BRACE

BY A. E. HOADLEY, M.D.

[illegible] Surgery and Surgical Diseases of Joints and [illegible] in the College of Physicians and Surgeons; [illegible] Surgery and Diseases of Joints, Chicago Policlinic.

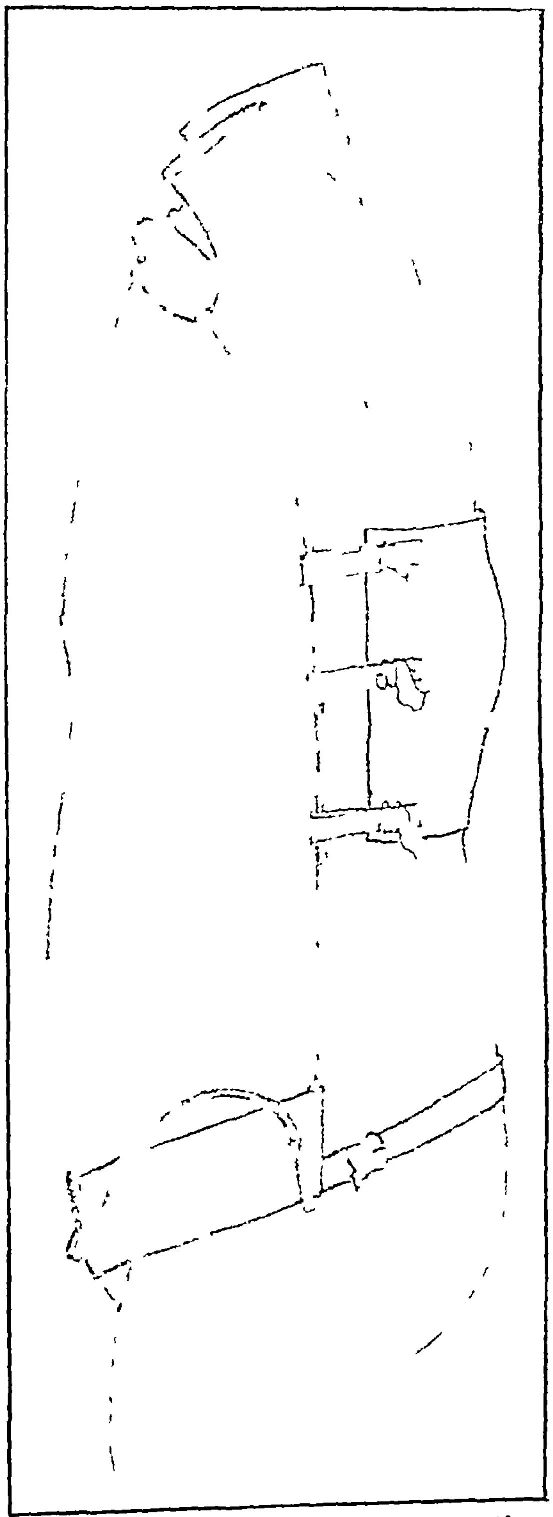
CHICAGO.

The brace that I wish to describe and exhibit, is one that I have designed and adopted for mechanical support of the middle region of the spine, the range of its greatest utility being the support of the spinal column between the middle of the lumbar and the middle of the dorsal regions, although its usefulness is not strictly confined to these limits. Inasmuch as the greater number of diseases of the spinal column requiring mechanical fixation occur within this region, its usefulness will be comparatively great if found to be an efficient brace.

In its simplest form the brace consists of a steel frame, a rigid chest pad and two aprons. The chest pad is adjusted in contour to fit the upper anterior portion of the chest. The pad should be in length about three times its width and adjusted transversely, resting immediately below the sterno-clavicular articulations. Its real length transversely should be as long as practical without being interfered with by the action of the pectoralis major muscles, in the movement of the shoulder. It should be made of sheet metal hammered to give shape and rigidity, covered and lightly padded.

The frame consists of one piece of light round rod steel, from three-sixteenths to five-sixteenths of an inch in diameter, so shaped that it crosses the body above and below and lies parallel with, and in close proximity to each side on a line with the axilla; the ends are welded or brazed where they meet, making it one continuous piece.

To facilitate the description of the frame we will divide it into four portions—an upper, a lower and two lateral portions. The upper and lower cross in front of the chest and pelvis respectively, and no portion of the frame passes behind the body. The upper portion of the frame arches upward and forward from a short distance below the axillary space on one side, crosses the chest pad, and then downward and backward to a corresponding point on the opposite side, where it becomes continuous with the lateral portions. There is no fixed point to indicate where the upper and lateral portions come together; a gentle reverse curve marks the place. The lateral portions are so adjusted as to lie close to the sides, a little nearer the posterior than the anterior aspects, and extend from below the axilla to the space just behind the anterior superior spine of the ilium, below the crest and above the trochanter major. In children, this portion is practically straight, while in adult females they bend in at the waist line and then arch out over the more or less prominent hips, but remain straight in the antero-posterior directions unless some deformity requires a change in this shape.



The lower portion is simply to connect the two lateral portions across the body at their lower ends and hold them rigid relative to each other In the adjustment of this portion, however, there are some difficulties, for if we extend it straight across from the lower end of one lateral portion to the other, it would prevent the flexion of the thighs, and then again if we arch it up over the thighs it would cross the body above the umbilicus and very materially interfere with the clothing at the waist And to cross behind the body would be still more objectionable, as the patient would then have to lie upon it and it would be more difficult to put it on and take it off, so it must take a somewhat tortuous course and cross in front, by avoiding those places where its presence would be objectionable This is accomplished by having the lower portion turn sharply upon the lateral portion which it is to follow a short distance and then arch in over the flexed thigh and then depress to, or very near the pubis, to some extent, following the fold of the groin in the direction of Poupart's ligament and as close as possible, having in mind that when the finished brace is applied no part of the frame touches the body but lies very close to it at all points

The upper portion of the frame rests by its central portion upon the center of the chest pad, to which it is secured by a double acting joint so that the pad may adjust itself to the chest

The lower portion of the frame is prevented from touching the body and given a fixed point by an apron made of two thicknesses of canvas from two to four inches wide, according to the size of the brace, between the layers of which a few whalebones have been inserted vertically to prevent rolling The apron is secured to the lower extremities of the lateral portions of the frame by its ends, and at such an angle that its direction from its attachment toward the center shall be downward, or, in other words, the upper margin of the apron at its attachment shall be the longer one, otherwise the tendency will be for the apron to slide up across the center of the abdomen This apron should be just long enough to keep the lower part of the frame from touching the body If properly adjusted it will pass across the lower part of the abdomen very close to the pubis, and upon each side will include, and remain below, the anterior superior iliac spines which constitute the lower fixed point of the frame

To complete the brace of simple form it is only necessary to attach the second apron or back band This second apron, which is to extend from one lateral portion of the frame across the back to the other, is to be also of double thickness made in shape to fit any angular deformity It should be from three to six inches wide without whalebones One end is to be permanently fastened to one lateral portion of the frame, at a position opposite that portion of the spine to be supported, the other end is to be provided with two or three straps with buckles with which to buckle it to the opposite lateral portion of the frame Thus completed, we have a spine brace of the simplest possible construction, the smallest amount of material, and at the same time providing for the fixation of the three points relative to each other, in a most positive and efficient manner The upper front part of the chest, the pelvic bones below and the weaker portion of the spine behind are retained in relative position to each other with positive certainty Positive, because these are parts of the framework of the body that have a certain relative stability to each other, and between which all of the deformities in caries of the spine in this region occur These are the points, and the only points, where definite and reliable resistance to deformity can with certainty be applied and maintained

In regard to the mechanical adaptability of the different parts to the purpose for which they are designed, I will speak separately

The frame as just described is identical with the first one that I made three years ago While I have experimented considerably, I have not in any respect changed the design originally made for the plain brace All that I can say of it is favorable, there are comparatively no objectionable features, while there are a few that are highly commendatory It is very light, strong, rigid, simple of construction, easily changed in shape, composed of one piece, and it is as much out of the way as it is possible to have anything that can claim the name, spine brace It can be readily constructed by any common blacksmith at the cross roads, which is no small consideration from an economical point of view

The small canvas apron that crosses the pelvis shrinks and molds itself over and around the anterior spines so that a most satisfactory support for the lower end of the brace is secured, capable of resisting any force that may be required either continuous or intermittent, and without producing excoriations or large callosities The difference between the plump or flat abdomen in the adjustment of the lower fixation is of no importance, even with the very fat there is less to contend with this, than with any other of the forms of lower fixation with which I am acquainted This small apron, so called, which is little more than a strap, is all that can be required and comparatively speaking it is *multum in parvo*

It is now about six years since I adopted the chest pad to support the upper part of the column Why it had not been used, fairly and squarely before, I did not know I could neither find that it had been used simply and alone, nor any reason why it had not been To me it seemed perfectly feasible, and from an anatomic standpoint, eminently proper I therefore determined to try it and, if possible, find out why it was in all corrective and retentive appliances for Pott's disease, that this particular region, the center and upper part of the chest, was universally avoided

I began by using a small pad to which I secured the upper ends of the parallel uprights that support the back pads of the common form of brace I found that the small pad was sufficient and comfortable, and as far as I could observe there were no ill effects from its use Consequently, when I came to design the present brace, the chest pad was no experiment It had already, in my hands, proved to be efficient and satisfactory I have now used it on this brace for nearly three years, and in a great variety of cases old and young, and in no single instance have I been able to observe the slightest deleterious consequences There is no complaint whatever, and no local changes to be seen I am, therefore, most emphatically of opinion that the proper place to secure and adjust the upper anterior fixation in spine brace is the upper part of the chest when the disease is low enough to permit I do not believe that there is any tendency to flatten or distort the contour of the chest, even the active rachitic patient tolerates this pressure without the slightest local change Neither is there the slightest impediment to respiration Relatively, the chest is the proper place, as suitable leverage can be obtained there and anatomically it is rigid and the effect of counter pressure is direct and reliable through the bony framework to the diseased portion and entirely independent of any muscular action whatever, and clinical experience thus far, shows that any required degree of pressure is tolerated with comfort, leaving perfect freedom of movement to the shoulders a condition of things quite unusual in spine braces

The back band that crosses the back at the seat of the disease, from one lateral portion of the frame to the other, furnishes, in my opinion, the best possible retentive force The distribution of pressure over a large surface is an advantage It is tolerated with perfect comfort It does not induce pressure atrophy or excoriate Pressing as it does, firmly upon the angles of the ribs as well as upon the spines, its influence to prevent or correct rotation or lateral deviation is far more than would at first sight be appreciated and when combined with some of the accessories which are to be described, this particular resistance to rotation and lateral curve or deviation becomes most effectual The firm unyielding character of the support and the great degree of force in the direction of correction that can with comfort be tolerated is surprising With a firm adjustment of this brace, bringing proper tension upon the gently curving chest pad, and bringing the pelvic strap or apron securely against the iliac spines and with the firm application of the back band to the full width of the back, exerting pressure upon the ribs as well as the spines, there is no tendency whatever, in the average cases, for any body movements to take place, such as the rotation of the upper part upon the lower, deviating to one side or the other The support is practically perfect, maintaining equal poise and suspending all voluntary effort to sustain equilibrium and the erect attitude

The foregoing description of the brace, together with the description of its applicability, refers only to the brace in its simplest form and to diseased conditions of average severity with but moderate deformity

The brace, however, is susceptible of many modifications and the addition of many accessories to meet the requirements of varying diseases and deformities, without losing the original principles of construction

The most simple modification which changes the shape of the frame is the substitution of a pad over the pubis and lower end of the rectus muscle, similar in construction to the chest pad, to take the place of the canvas apron at that point The frame is then changed so that the side portions, just above the crest of the ilium, turn forward and inward, to follow nearly the fold of the groin, and to meet in the center over the pubic pad, and to which it is attached by means of a joint that will permit of a racking motion only, two staples, an inch or two apart, answer very well This modification of the frame does away with that portion that passes down to the space above the great trochanter This simple form is all that can be desired as a convalescent brace It is light, easy, inexpensive and very efficient, and the pubis and tissues immediately above it tolerate the pad pressure remarkably well

When it is desirable to fit this brace to a patient who has a tendency to a lateral inclination it should be provided with three pads, one above and one below on the concave side and the other in the middle of the convex side The one below should be round and hung loosely on the lower end of the frame, so as to rest in and adjust itself to the space described above the great trochanter The upper pad should rest just as close to the axilla as practical, the frame to be modified so as to support it It may be arranged transversely or vertically I usually use at this point, long or oblong pads The middle pad should be long and attached, with its long axis vertical to the lateral portion of the frame at the place where the pressure is to be exerted

As much retentive and corrective force may be applied in this way as the patient can tolerate Where great need exists for lateral retentive force, it is advisable to add crutches to the brace The crutches can be made a part of the frame, and adjusted from below by raising or lowering the entire frame, which can be done within short limits, or, what is better, have the crutches supported by a separate piece made adjustable upon the lateral portion of the frame Where this lateral method is adopted it is necessary to have the back band secured by straps and buckles upon each side Where the crutches are added it is also necessary to attach a supporting band at the lower end of the frame to carry the crutches and their superimposed weight A strong webbing strap, buckled across the lower part of the back or sacrum from the lower extremity of one lateral portion of the frame to the other, answers this purpose exceedingly well

Any required degree of support is easy to bear and is unyielding It is by far the best crutch support with which I am acquainted Taken together with the little pelvic apron that crosses in front it embodies the principle which is in the support adopted by the color bearer, in carrying the heavy pole and flag Pads at the lower extremities of the lateral portions of the frame are advisable where the supporting strap is applied, although not strictly necessary where the frame is well made and rigid

Where there is much compensatory lordosis, protrusion of the lower ribs, or a very prominent abdomen, an apron of proper dimensions should be strapped across the front of the abdomen at the place required and with the required tension Occasionally it is desirable to include the whole front of the body in such an apron In some cases where the body is thin and the spines prominent at the seat of the disease and deformity, it is advisable to provide the back band with two pads, to rest one upon each side of the spine These pads should be secured to the back band, made wide enough to extend from the spines of the vertebræ to the angle of the ribs and as long as the band is wide They should be made as hard and as smooth as practical by stuffing them with cotton or wool, or make them primarily of folded blanket

To make the frame for any given case it is always advisable to first make a frame of soft iron, or copper wire, of a size that can be readily bent with the fingers, should be selected The patient should be placed lying on the back, with the body in the position in which it is to be retained, and the wire bent to fit the body just as the finished frame should fit It is best to adjust the wire across the lower part of the body first, and the ends will lap across the top of the chest where the lapped ends are to be secured by winding them around each other, or winding with a string, the former is the best plan This wire frame which can be made exact in shape, furnishes the artisan perfect lines for the construction of the finished steel brace

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WHEN SHALL HYSTERECTOMY BE PERFORMED IN PUERPERAL SEPSIS?

Read at the Mississippi Valley Medical Association at Detroit Sept 3 1895

BY BAYARD HOLMES, B S , M D

PROFESSOR OF THE PRINCIPLES OF SURGERY IN THE COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO

CHICAGO

It must be admitted by all observers that too many women die of puerperal fever, even in these antiseptic and aseptic times Curetting and irrigation with all their modifications are not always effective Infection gets beyond the reach of the curette The interior of the uterus becomes clean and relatively well, but the sepsis goes on In the treatment of infected wounds, one of the first indications is the removal of the infected tissues Hysterectomy alone in certain cases of puerperal sepsis meets this indication It is the purpose of this paper to show when hysterectomy should be undertaken for this disease Incidentally the frequency of the disease and some points in its pathology are treated

I —FOUR CASES OF PUERPERAL SEPSIS TREATED BY THE AUTHOR BY FOUR DIFFERENT METHODS

Case 1 —Curetting and Irrigation only—Death —The patient was a multipara 26 years old She came from an Irish family and had had tubercular disease when a child She was confined in a barn by a competent physician with no other person about to help him There was violent post-partum hemorrhage which yielded to nothing, except the introduction of the hand into the uterus and slow removal of the placenta This operation was done without help and without chloroform Sepsis appeared almost at once The uterus was carefully curetted several times and irrigated at frequent intervals In spite of everything the sepsis continued for seven weeks and the patient died of pulmonary infarction at the end of that time

Case 2 —Septic Peritonitis—Double Salpingectomy—Death —This patient had a history of gonorrhea after the birth of her first child She was 35 years old and had suffered frequent attacks of ' pelvic inflammation " She had a second child three years ago, the birth of which was followed by sepsis She was confined to her bed three months She had an abortion performed on a three months fetus four weeks ago This had been followed by a pronounced sepsis The uterus had been curetted carefully by a competent physician and twice packed with iodoform gauze for six hours each time On examination, March 10, 1895, I found her temperature 104 6 The pulse was 140 The respirations were rapid and constrained The abdomen was tympanitic Vomiting had been almost constant for three hours The bowels had resisted all attempts to move them A large area of dullness could be made out in the right inguinal region The uterus was tipped over to the left The right pelvis was filled with a doughy mass The extremities were cold Under these circumstances not much could be expected from operation, yet nothing could be gained by other treatment The abdomen was therefore opened The right pelvis was found to be a great abscess in which the greatly distended and infiltrated tube was found The left tube was also full of fluid (old pyosalpinx) and was removed The uterus was almost exactly the normal size It was not edematous and was left in the pelvis Both sides of the pelvis were drained with gauze tampons through the abdominal wound The patient rallied well after the operation and did well for five days She gradually grew worse then, had several attacks of phlebitis and died of pulmonary embolism nine days after the operation There were no symptoms of peritonitis after the operation

Case 3 —Curetting—Removal of Right Tube and Ovary—Vaginal and Abdominal Drainage—Death without Peritonitis —This patient was 30 years old She had been confined five weeks before examination Symptoms of sepsis appeared on the fourth day and continued of a low grade There was a renewal of septic symptoms on the tenth day after sitting up and walking a little When I examined her, April 20, 1895, she was slightly tympanitic, the pulse was 112 and the temperature 101 She had no appetite and had vomited a little once or twice The bowels were easily moved with enemas and mild laxatives The vagina was edematous but the uterus was well contracted The right side of the pelvis, as felt through vagina, was firm and hard, the left side somewhat less so The patient was carefully watched for three days while the uterus was almost constantly irrigated and twice curetted, and packed with iodoform gauze All the symptoms grew steadily worse, chills occurred twice a day with a slow rise of temperature and tympanitis This led me to make abdominal section The right tube was found as large as the thumb red and infiltrated It was removed with the right ovary The uterus was firm, hard, small and not at all edematous I did not remove it The left tube was normal and was not disturbed The right pelvis was drained by means of a tube from the abdominal wound above into the right side of the vagina and packed about with iodoform gauze *After a few days of improvement the* patient grew gradually worse and died of septic phlebitis *without peritonitis* eight days after the operation

Case 4 —Septic Peritonitis—Removal of both Tubes and Ovaries and the Uterus —The patient was a multipara 32 years old The labor occurred six weeks ago and was uncomplicated A midwife, noted for her train of puerperal fever, was in attendance at the time On examination, May 14, 1895, I found a temperature of 104 degrees and a pulse of 124 The abdomen was tympanitic and greatly distended, vomiting was almost constant There was great tenderness over the whole abdomen When the patient was on her back both flanks were dull, when turned on her side, the left flank became tympanitic In making a vaginal and bimanual examination extensive infiltration of the right side of the pelvis could be made out The uterus was about the size of a uterus when four months pregnant Operation was undertaken for the removal of the septic material twelve hours later After the proper preparation of the patient, she was chloroformed and placed in the Trendelenburg position, and the abdomen opened. On the first incision, about a pint of sero-purulent fluid slowly poured out As the right tube was grasped, another gush of pus came out This broad ligament was large and edematous It was separated from its adhesions to the pelvic wall and tied off The uterine artery was ligated and the uterus was then amputated from before backward, and from right to left with a dull knife After ligating the other uterine artery and the left ovarian artery the cervix was closed upon itself by two rows of catgut sutures , one buried in the cervical tissues and one superficial in the peritoneum All hemorrhage was stopped, the abdomen carefully washed out with several pitchers of sterilized hot water and the pelvis drained with a large iodoform gauze drain coming out at the lower part of the abdominal wound The rest of the abdominal wound was closed with two rows of sutures In spite of the fact that this operation was done in a hovel, and in spite of the additional fact that a factory next door burned down three days after the operation, making it necessary to lay the patient for an hour on the sidewalk in front of the house, she made a most excellent and rapid recovery and was out of bed in five weeks

The pathology of this case is extremely interesting The section of the uterus measured 4 5 centimeters in anterior posterior diameter after hardening in formalin The transverse diameter just below the opening of the tubes, was 7 75 centimeters The diameter of a section of the ovarian ligament was 2 5 centimeters on the right side and a little less on the left side There was an abscess in the right ovarian ligament with partial necrosis of its posterior wall This abscess was about a centimeter in diameter There were two other abscesses about the same size in other parts of the ligament On inspection of a thin transverse section the interior of the uterus was found lined with a black necrotic mass Pigmentation extended outward from the mucosa about a centimeter in all directions The whole of the right broad ligament was of this same dark color On microscopic

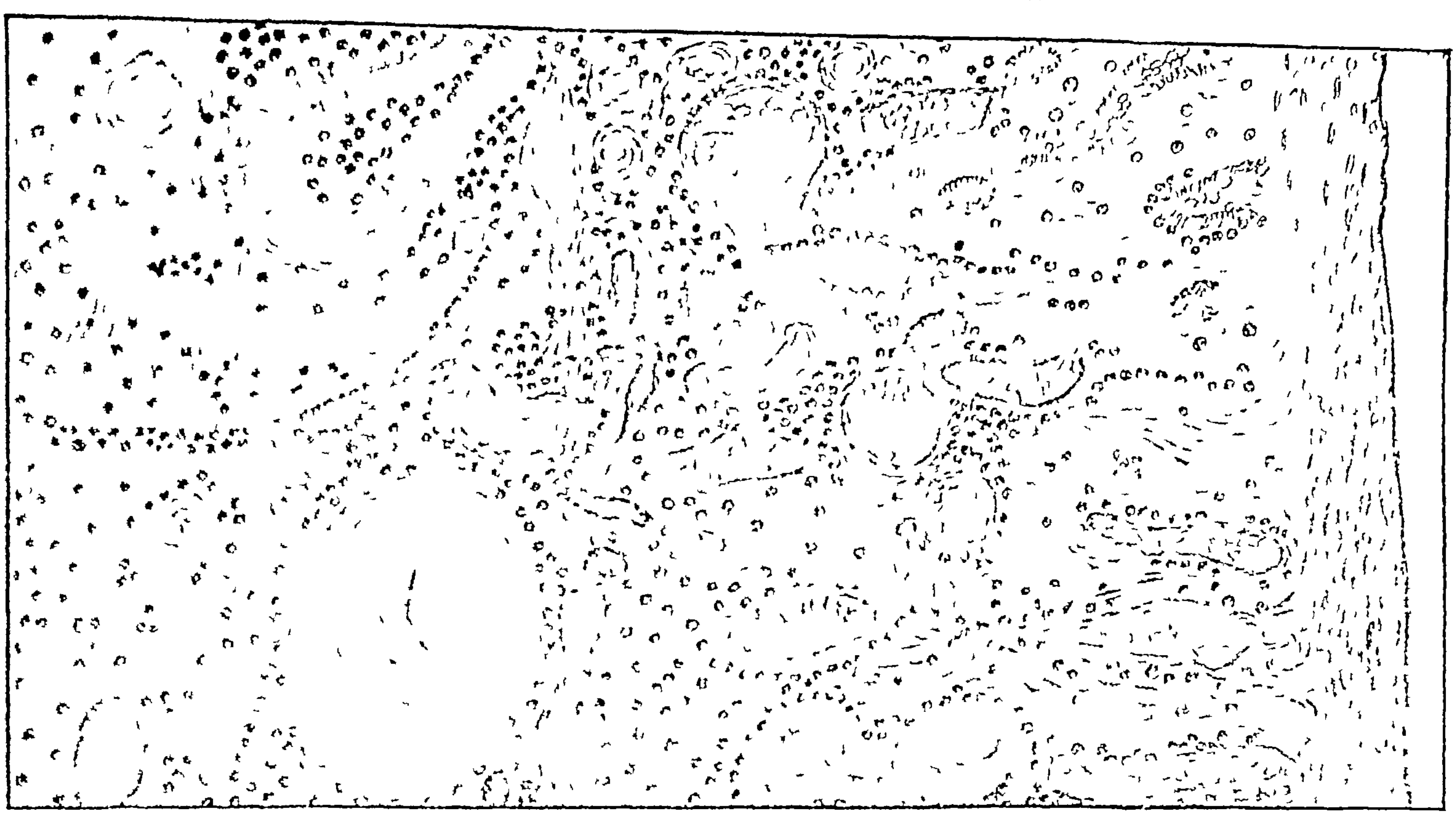

FIG. 1—[illegible] section of the body of the uterus partially schematic p the peritoneal surface a, a, a, obliterated blood [illegible] filled with pus corpuscles (c) and leucocytes m, m, mastzellen The other end of the section [illegible] The mucosa was everywhere surrounded by groups of pus corpuscles

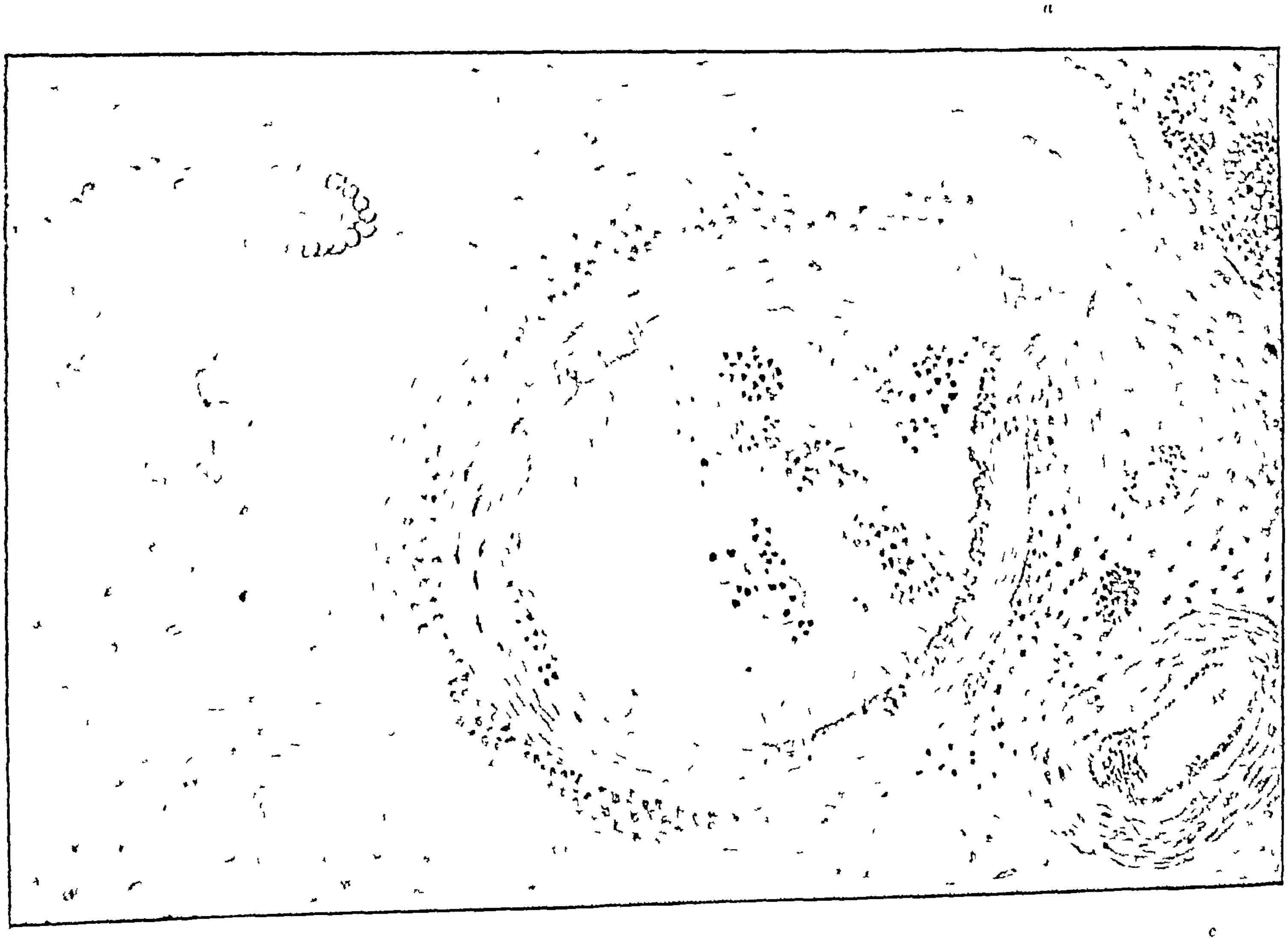

FIG 2—Section of the right broad ligament showing an advancing thrombus in an artery coming out from an obliterating thrombus in a branch, (a) marked perivascular infiltration (b) and complete thrombosis of accompanying vein (c)

examination the mucosa was found in a condition of rapid reproduction In many places, as shown in the drawing, repair was nearly complete Yet everywhere the epithelial cells and mucous glands were surrounded with groups of pus cells The perivascular lymph spaces in the musculosa from the mucosa outward were in many places crowded with pus corpuscles, but in no place was an abscess of any size found *Mastzellen* were very abundant in some parts of the musculosa, but not very often found where the pus corpuscles were most numerous Many of the blood vessels of the uterus were entirely obliterated with thrombi and these thrombi were sometimes crowded with pus corpuscles In one section of the broad ligament a small blood vessel was found partially occluded by a thrombus which had gone out from a small branch of the artery The drawing shows the condition very well The obliterating thrombus in the branch is full of pus corpuscles The advancing thrombus in the trunk has many such pus corpuscles between the intima and the thrombus The wall of this artery is invaded on one side Some such blood vessels were entirely obliterated Many sections of the tube on both sides showed no accumulations in the tubes, no destruction of the *arbor vitæ* of the tube and no considerable inflammation of the peritubal tissues

The condition may be described as a suppurative endometritis, suppurative perivascular lymphangitis of the uterus, of the ovarian ligaments and of the broad ligament Obliterating thrombosis of uterine and peri-uterine blood vessels Multiple abscess of the right ovarian ligament Multiple peri uterine peritoneal abscesses, adhesive and limiting peritonitis

II —THE RESULTS OF CURETTING IN THE HANDS OF ITS ADVOCATES

Leopold (*Dritter Beitrag zur Verhutung des Kindbettfiebers*) *Arch fur Gyn*, vol xxxv p 149) considers 1,369 cases of labor attended 1888 and out of these 15 died, only two of them sepsis

Braun-Firnwald (*Ueber antiseptische Excochleatio uteri bei Endometritis puerperalis Arch. fur Gyn*, vol xxxvii, p 452) made a study of 7,600 cases of labor in a period of two and half years, 1887-1889, curettement was performed in 101 of these cases Out of these 101 cases, 96 recovered and 5 died Beside these five deaths there were forty other deaths

The following tables show the causes of death

12 cases from March 1, to December 31, 1887

Placenta previa, hemorrhage	3
Rupture of the uterus	2
Suppurative nephritis and cystitis, old tuberculosis	1
Phlegmon of the foot, pyemia	1
Eclampsia	1
Pericervical abscess	1
Puerperal sepsis	3
	—12

During the year 1888 diffuse peritonitis from rupture of the gall bladder during labor	1
Rupture of cervix uteri	3
Osteomalacia, Cæsarean section, degeneration of liver and kidneys without asepsis	1
Apoplexy, Cæsarean section, living child	1
Eclampsia, (1 hemorrhage nephritis)	5
Osteomalacia, Cæsarean section, sepsis	1
Rachitis, Cæsarean section, sepsis	1
Puerperal sepsis	8
	—21

Jan 1 to Sept 30, 1889 Placenta previa, hemorrhage	1
Rupture of the uterus	2
Chronic nephritis	1
Puerperal sepsis	3
	— 7

Total deaths	40
Puerperal sepsis	14
Per cent of deaths from sepsis of all deaths	35

It appears that puerperal sepsis was the greatest cause of death even in the hands of a careful obstetrician The curetting of the uterus was not an unfailing remedy, as the following epitome of the histories of the five cases that died after curetting shows

1 Normal labor, slow infection on fourth day Curetting Peritonitis on eighteenth day Temperature 40 degrees, vomiting delirium Death on thirtieth day

Autopsy mild puerperal endometritis uterine lymphangitis, general purulent peritonitis, hemorrhagic left pleuritis Observations Hysterectomy ought to have been performed on the eighteenth day

2 Normal labor Chill and rapid infection on the fifth day Intra-uterine irrigation without effect Curetting on the eighth day, no avail Sudden onset of vomiting and distension, thready pulse Death on the tenth day

Autopsy slight endometritis, double salpingitis general suppurative peritonitis with large exudate Observations Hysterectomy ought to have been performed on the eighth day

3 Normal labor Fever on the second day Bad smelling lochia Curetting on fourth day with removal of decidua no avail On the twelfth day distension, vomiting Death on the seventeenth day

Autopsy endometritis, uterine phlebitis, diffuse suppurative peritonitis Observations Hysterectomy ought to have been performed on the thirteenth day

4 Normal labor Chill on the morning of the fifth day Temperature 39.2 degrees Intra uterine irrigation, no avail, diarrhea On the ninth day, curetting, no avail On the thirteenth, symptoms of phlebitis Death on the twenty-first day

Autopsy slight endometritis, general peritonitis Observations Hysterectomy ought to have been performed on the eighth day

5 Normal labor On the fifth day slow infection On the sixth, temperature 39 degrees Curetting, normal temperature the two following days On twelfth day chill, temperature 40 degrees, fresh blood in lochia Intra-uterine irrigation iodoform tamponade No avail On nineteenth day large hemorrhage from uterus Death on twenty-ninth day

Autopsy endometritis, subsequent septicemia, acute anemia Observations Hysterectomy ought to have been performed on the nineteenth day

In the 101 cases of sepsis in this series, the following table shows the time of onset of infection as indicated by the rise of temperature, or by the chill, and interpreted by the subsequent history

On the day of labor	1 case
1 day after labor	1 "
2 " ' "	10 "
3 " ' "	14 '
4 " " "	30 "
5 ' " "	21 "
6 " " "	11 '
7 " " "	6 "
8 " " "	3 '
10 ' " '	2 "
11 " " "	1 "
12 " " "	1 "
Total	101

We see, then, that in 101 cases of sepsis treated by Braun-Firnwald, curetting failed five times and in these five cases there is every reason to believe that hysterectomy would have been effectual in saving the life of the patient

III —PUERPERAL SEPSIS IN CHICAGO, NEW YORK, AND BROOKLYN

In the city of Chicago during the years 1881-1894 2,127 deaths from puerperal fever were reported, or about 0 9 per cent of all deaths This is computed to be about 3 5 deaths to each 1,000 births In the year 1894, 214 deaths were reported from the city of

Chicago as due to puerperal fever, while many other reports, under different heads, would indicate a still larger death rate from this cause It is estimated that more than half of all confinements in the city are in the hands of midwives[1]

The following table is copied from the report of the Department of Health of Chicago and gives in the first column the year, in the second column the number of deaths reported during that year from puerperal fever, in the third column the per cent of these deaths of the total mortality, and the fourth column the number of deaths from this cause to the 1,000 births reported

Year	No deaths reported	Per cent of deaths	No deaths per 1,000
1881	111	1 03	7 31
1882	107	0 81	5 16
1883	152	1 32	7 08
1884	108	0 86	4 57
1885	107	0 86	4 23
1886	126	0 92	4 11
1887	110	0 91	5 16
1888	186	1 18	6 10
1889	137	0 81	3 65
1890	166	1 76	3 55
1891	176	0 63	3 64
1892	171	0 66	3 13
1893	181	0 67	3 31
1894	214	0 89	3 22

In New York for the six years ending May 31, 1890, there were 250,739 deaths, of which 116,126 were females 2,276 died in the puerperal state and 1,250 of these deaths were due to puerperal fever

In Brooklyn during the same period, there were 112,367 deaths, 53,866 being females, 867 deaths were in the puerperal state and of these 462 were due to puerperal sepsis

The question of treatment of puerperal sepsis by hysterectomy is therefore one which vitally concerns at least 214 persons a year in Chicago, 208 persons a year in New York city, and 78 persons a year in Brooklyn

IV —ANALYSIS OF THE CASES OF DEATH FROM PUERPERAL SEPSIS OCCURRING IN 6,635 CONSECUTIVE CONFINEMENTS

Perhaps the relation of puerperal sepsis to the normal uninfected puerperium can be best understood by making a study of the work of some of the obstetrical hospitals under the best management For this purpose I first call your attention to the Charité, of Berlin All my information comes from the official reports in the *Charité Annalen* for the years 1889–90, 1890–91 and 1891–92, 1892–93 In these four years, 6,635 women were confined, with 79 deaths from all causes Of these deaths, thirty-three resulted from puerperal sepsis In order to fully understand these cases I have made brief abstracts of the histories and the pathologic findings at post-mortem These cases were treated by Hensoldt,[3] Schwarze, Hünermann and Hochsetter, during the four successive years mentioned, each having the clinic a year at a time

During the year Hensoldt had 1,626 confinements, covering a part of the calendar years 1889–90 There were sixteen deaths that is to say a death rate of 0 61 per cent This death rate was distributed as follows puerperal fever, ten; heart failure, two, eclampsia, two, pneumonia, one, hemorrhage, one, total, sixteen

There were sixty-two cases of puerperal fever during the year 1890–91 Some cases were insignificant Among these were three cases of unknown origin, two cases of puerperal endocarditis, two cases of mild phlegmasia alba dolens, eleven cases of parametritis, three cases of diphtheria of the external genitals, one case of inflammation of the sacro-iliac joint, and one case of tuberculosis of the lung In fourteen cases the gonorrheal condition of the flow was demonstrated In one of these cases puerperal fever followed labor One ovarian tumor was present in a secundipara Syphilis was present in 63 cases out of the 1,626, but we are not told how many of these were included in the 62 cases of sepsis

The total number of infected cases among these 1,626 confinements was 62, being 3 81 per cent This compares very favorably with the records of the hospital during the previous years In the twelve months preceding, the hospital year 1888–89, the per cent of infected cases was 2 31 In the year 1887–88 the rate of infection was 2 50 per cent, and in the year 1886–87 it was 2 31 The number of deaths from infection during these four terms of twelve months each was 61 per cent, 36 per cent, 37 per cent and 55 per cent respectively Nine of the ten cases that died under Hensoldt's care I have carefully abstracted and added a line of observations They are as follows

1 Normal birth, chill on fifth day, scarlet fever-like eruption over whole body, marked gastric symptoms, stinking lochia urine free from albumin The eruption disappeared on the tenth day, but the fever continued and a slight systolic murmur appeared with mild bronchitis The spleen became enlarged and the abdomen distended On the fourteenth day, emboli under the skin showed themselves, and on the fifteenth day collapse and death

Autopsy gangrene of the skin of the right index finger. multiple infarcts of the left arm, fatty degeneration of the heart muscle mitral stenosis, mitral endocarditis, edema and red hepatization of the lungs, hyperplasia and infarcts of the spleen, nephritis, hepatitis Observations This case could probably have been saved by hysterectomy performed on the tenth day or before the fourteenth

2 Normal birth, chill on the third day, systolic murmur on the eighteenth day, delirium on the twenty-first day with symptoms of compression of the brain, exophthalmus on the twenty-third day, death on the twenty-fourth day

Autopsy purulent meningitis of the base, endocarditis and pericarditis, dilatation and hypertrophy of the heart, right circumscribed pleuro-pneumonia, edema of the lungs, slight parenchymatous nephritis, metritis, endometritis, pyelitis, cystitis Observations This case might have been saved by hysterectomy performed on or before the eighteenth day

3 Normal second birth, chills on the third day, bad smelling lochia, peritonitis on the fourth day, death on the seventh day

Autopsy general fibrinous peritonitis, diphtheritic endometritis, phlegmonous parametritis, pulmonary edema, parenchymatous myocarditis, parenchymatous hepatitis, hyperplasia of the spleen Observations This case could probably have been saved by hysterectomy performed on the fourth or on the fifth day

4 Normal third birth, on the third day stinking lochia and high fever, evidence of tuberculosis in apices of both lungs, on the tenth day a venous thrombus on the inner side of the right knee, on the twelfth day this thrombus was opened and discharged pus, dyspnea this day with bloody expectoration, on the fourteenth day somnolence, thin brownish sputa, right pleuritis, on the sixteenth day sudden death in collapse

Autopsy endometritis, pericarditis pleuritis, parenchymatous nephritis, hepatitis, splenitis, old phthisis, suppurative right pneumonia Observations This case could perhaps have been saved by hysterectomy performed on the tenth day with coincident removal of the thrombus in the leg

5 Primipara 19 years old, normal labor, followed by rapid pulse, 92–120, membrane appearing on the vagina on the

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[1] Report of Commissioner of Health, 1885, pp 263

[2] Billings, John S Vital statistics of New York city and Brooklyn U S Department of the Interior Washington,1894 4°

[3] Hensoldt Charité Annalen, sixteenth year, 1891, p, 256, et seq

third day, on the sixth day high fever with foul lochia, pain on the right side of the uterus, on the eleventh day chill, high fever and severe general symptoms, on the fourteenth day vomiting, with abdominal pain and distension, on the fifteenth day continued vomiting, increased tympany, diffuse bronchitis, very small and rapid pulse and rapid respirations, on the twentieth day the left shoulder became swollen and painful, respiration more rapid, right sided pleuritis, on the twenty first day emboli were observed under the skin of the back and beginning bed sores, death on the twenty-sixth day

Autopsy puerperal fever, endometritis diphtheritica placentaris, adhesive and encapsulated suppurative peritonitis, general fibrinous, purulent and ichorous peritonitis, hyperplasia of the liver, endarteritis of the aorta, edema of the lungs Observations Hysterectomy was indicated on the fourteenth day It is uncertain what the membrane was If diphtheria, it is a question to be studied

6 The eighth birth of a woman 45 years old Repeated attempts had been made by two physicians to apply the forceps before admission to the hospital The high operation was performed and a large child (58 c m long, 5320 g weight) easily delivered The placenta was removed on account of hemorrhage and atony of uterus The patient vomited almost continually, the pulse was very rapid (116–124) the temperature high and the lochia offensive On the eighth day irrigation of the uterus and a second tamponade of uterus, the seventh day after this there was a chill, the temperature rose and the lochia continued offensive The uterus did not contract On the fourteenth day painful dyspnea, diffuse bronchitis, small pulse (108–120) frothy expectoration Death on the nineteenth day

Autopsy puerperal sepsis, diphtheritic endometritis, parenchymatous myocarditis, fatty degeneration of the myocardium, edema of the lungs Observation Hysterectomy was indicated on the tenth or eleventh day and would doubtless have been effective in saving the life of the patient

7 Primipara, 31 years old Placenta previa, hemorrhage and delivery of a dead child in the tenth month (51 c m long, 2680 g wt), on the third day rise of temperature, on the fifth a chill and all the ordinary symptoms, on the eighth day delirium, collapse, and on the tenth day death

Autopsy diphtheritic placental endometritis, nephritis, hepatitis, parenchymatous gastro-adenitis, hyperplasia of the spleen, multiple suppurative and lobular pneumonia, hypertrophy of the heart, fatty degeneration of the myocardium, chronic endocarditis Observation Hysterectomy was indicated on the eighth day and would probably have been effective in saving the life of the patient

8 Placenta previa Last menstruation in October, 1889 Jan 25, 1890, to end of March repeated hemorrhages, treated the latter part of the time with vaginal tamponade On March 27 she entered the hospital in extreme anemia Temperature 38 5, rapid pulse The cervix admitted one finger The fundus stood at the umbilicus Labor pains Antiseptic tamponade of the cervix Anesthesia after four hours and removal of the macerated fetus and succenturate placenta Curettement of uterus On the next day temperature 40 and over, pulse 149, vomiting, on the second day delirium The lochia was not offensive On the fourth day hyperesthesia with full temperature and considerable rise of pulse rate Death on fifth day Autopsy Puerperal sepsis, diphtheritic endometritis of the cervix, beginning right hypostatic pneumonia, edema of the lungs, hyperplasia of the spleen, parenchymatous nephritis Observation This is a case of rapid infection Hysterectomy might have saved the patient if performed on the second or third day

9 Primipara, 21 years old, delivered of a small child (42 5 c m, 1670 g) with the forceps The patient was frail and anemic but had a perfectly normal course until the eighth day On the ninth day there appeared with severe constitutional symptoms a temperature of 39 9 and a pulse of 132 The slightly bloody lochia became offensive After irrigation of the uterus the temperature fell on the eleventh day to normal but the pulse remained at 100 On the fourteenth day the lochia again became offensive A second irrigation of the uterus showed no coagula in the cavity, but as the catheter was being withdrawn the patient went with a sudden spasmodic movement into a deep collapse and died

Autopsy puerperal fever with parenchymatous changes in all the organs of the body Observation this case shows the dangers of conservative treatment even There was perhaps no time during the life of the patient that hysterectomy was indicated

During Schwarze's[4] service, 1890 91, 1,480 women were confined Of these fifteen died as follows

Puerperal fever five, eclampsia six, rupture of uterus two, heart failure one, hemorrhage one, total, fifteen

1 Second confinement, 20 years old Two days before admission, chills and fever with diarrhea Temperature 39 5, pulse 124, cyanotic countenance, dry tongue, rapid breathing, no cause in lungs Tympanitis Rapid spontaneous birth of a living child The high fever continued after the birth with all the ordinary symptoms Death in the second week, apparently of edema of the lungs

Autopsy puerperal sepsis, general ichorous peritonitis, nephritis, hepatitis, parenchymatous myocarditis, hyperemia and edema of the lungs, hypertrophy of the spleen. Observation This case of infection before labor was one in which hysterectomy was indicated and would doubtless have been effectual in saving the life

2 Primipara, 20 years old Began labor with a distended tympanitic abdomen, pulse 72, no fever Some pain over Poupart's ligament on the right side, with the use of an enema a free movement was secured Five days later labor came on and in a few hours of normal labor a poorly nourished living child was born Immediately after delivery deep collapse, pulse 160 The abdomen tympanitic, painful, shortly all the symptoms of general puerperal infection, and death on the twelfth day

Autopsy endometritis and purulent peritonitis multiple pulmonary abscesses, parenchymatous nephritis and hepatitis hyperplasia of the spleen The abdomen was full of brownish pus The abdominal and pelvic organs were adherent The appendix showed the scar of an old ulcer Observation This seems to have been a case of chronic appendicitis which was perhaps one source of infection It is uncertain from the history whether or not it was the only source If it was the only source of infection, it was a case of appendicitis complicating the puerperal state If this idea is correct, removal of the appendix was indicated

3 Primipara, 29 years old On June 17, chill and fever which subsided after a few hours On June 18, labor pains came on in the night and in a few hours a living child was born During labor no fever About one and a half hours after delivery, chill, temperature 40 8 and bilious vomiting On the morning of the second day after delivery temperature 37 9 A second chill in the afternoon with a temperature of 39 6 The disease continued until June 27 when the patient died, on the ninth day after delivery

Autopsy puerperal endometritis, phlegmonous parametritis, phlegmonous myostitis of the right arm, arthritis of the left elbow, hyperplasia of the spleen Observation This was a case of rapid infection which called for early interference It could have been treated on the third day or as late as the fifth day with good hope of recovery by the removal of the uterus and tubes The history, however, is too incomplete to form the basis of the indication as to time

4 Primipara, aged 21 years, normal birth On the fifth day fever and offensive lochia Temperature and pulse continue high and a membrane appeared in the vagina Exudation felt on both sides of the uterus On the seventeenth day all the symptoms of peritonitis and on the nineteenth day death

Autopsy purulent endometritis, purulent para uterine thrombophlebitis, perithrombotic abscesses, fibrino purulent peritonitis, subinvolution of the uterus, hyperplasia of the spleen, parenchymatous hepatitis, nephritis and gastritis, multiple pulmonary abscesses Observation There was abundant time in this case to remove the infection It should have been done probably on the eighth or tenth day

5 The ninth confinement of a woman 39 years old, normal birth Great edema of the lower extremities with large varicose veins On the fourth day chill, temperature 39, pulse 120 The lochia became offensive On the fifth day painful thrombosis of both thighs, the region of these thrombi quickly became inflamed On the *labia majora* great swelling Death on the seventh day of cyanosis and edema of the lungs The thrombi in the legs were in a gangreuous condition

Autopsy gangrenous diphtheritic endometritis, parenchymatous hepatitis, hyperemia and edema of the lungs hyperplasia of the spleen Observation This was a case of rapid infective thrombosis It was hopeless after the fifth day

6 Secundipara, placenta previa, tamponade after hemor-

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[4] Schwarze Charité Annalen seventeenth year 1892, p 479

charge and extraction On the fifth day fever and rapid pulse On the seventh, edema of the labia extending to the rectum Diphtheritic membrane on the vagina and cervix uteri Thrombosis and phlegmonous inflammation of the back and thighs No chill, no infiltration of the parametrium Death on the tenth day

Autopsy puerperal sepsis, vaginal wounds, diphtheritic vaginitis and diphtheritic inflammation of the cervix uteri, multiple abscesses of the skin, incipient parenchymatous myocarditis, endocarditis, incipient endocarditis of the aorta multiple abscesses of the left lung and edema of the lungs fibrino purulent and ichorous left pleuritis, nephritis Observation This is a case of rapid infection Hysterectomy might have saved the patient, if performed on the second or third day

7 Primipara 21 years old Delivered of a small child ([illegible] c m 1670 g) with the forceps The patient was frail and anemic but had a perfectly normal course until the eighth day On the ninth day there appeared with severe constitutional symptoms, a temperature of 39 0 and a pulse of [illegible] The slightly bloody lochia became offensive After irrigation of the uterus the temperature fell on the eleventh day to normal but the pulse remained at 100 On the fourteenth day the lochia again became offensive A second irrigation of the uterus showed no coagula in the cavity

During Hunermann's service out of 1,860 cases in the obstetrical department of this hospital, 27 died during the year 1891-1892 eclampsia ten, placenta previa one tuberculosis of lung one vitium cordis two, puerperal sepsis thirteen total twenty-seven

Beside the thirteen deaths from puerperal fever there were one hundred and forty-four cases of fever, sixteen cases of parametritis, six cases of perimetritis, one case of diphtheria of the external genitals with endometritis, and forty one cases of severe puerperal infection, with recovery There were two cases of thrombosis of the femoral vein Tuberculosis of the lungs was observed in fifteen cases There was one case of pyonephrosis, ninety cases of syphilis, seventeen children required treatment for gonorrheal ophthalmia

1 Strongly built woman but poorly nourished Temperature on admission 39 5 Stupid labored respiration, pulse 132 to 96 Uterus three fingers above the navel In urine 1 volume of albumin Three-quarters of an hour after admission spontaneous delivery of a small 25 c m child and placenta Death eleven hours after delivery Autopsy exquisite puerperal sepsis Observation This was a case hopeless from the first

2 The eighth confinement of a 33-year-old woman Rupture of the membranes at time Three days the mother went about her work until an arm presented Dilated cervix contracted uterus Temperature 39 Cyanosis Difficult version Delivery of a slightly macerated boy (51 c m , 2950 g) Liquor amnion stinking Immediately after birth the temperature was 41 7 and the pulse 111 On the next day the typical picture of sepsis double sided pneumonia severe albuminuria tympanitis, offensive lochia, persistently high fever Death on the fifth day

Autopsy puerperal sepsis, double pneumonia, diphtheria of cervix uteri, diphtheritic endometritis and cystitis, parenchymatous nephritis Observations Hysterectomy useless, except on the day of delivery

3 Third confinement, version and extraction outside the hospital On the next day dilatation of the abdomen and on the second day temperature 38 6, pulse 96 to 124 Abdomen very tympanitic Irrigation of the uterus and discharge of clots of blood The sepsis continued without chills, temperature 40 Frequent and severe dyspnea, obstruction of the bowels and diffuse peritonitis On the twelfth day edema of the lower extremities and death on the fifty-fifth day in collapse

Autopsy slow puerperal peritonitis, purulent and fibrinous, parenchymatous hepatitis, nephritis and gastritis, interstitial abscesses of the kidney, pyonephrosis, hyperplasia of the spleen and perisplenitis, perimetritis with abscesses, acute endometritis and parenchymatous gastritis Observations In this case of slow infection there was abundant time for hysterectomy It should have been done during the second week at latest

4 Secundipara, 20 years old Spontaneous delivery of a dead child before admission to the hospital On admission temperature 38 8, pulse 120 On the second day vomiting and tympany On the third day chill Continued vomiting and tympany of abdomen Temperature 39 2, pulse 124 On the sixth day petechia over the whole body, icterus, friction sounds on the lower back part of right lung, impure heart's tone, large amount of albumin in the urine On the eighth day more icterus and death on the ninth day

Autopsy diphtheritic endometritis myocarditis, parenchymatous nephritis, hepatitis, hyperplasia of the spleen, icterus Observations Hysterectomy would have been effective doubtless on the second day but not later

5 Eighth birth, 36 years old, small child (34 c m , 840 g) Temperature on admission 39 8 The birth had taken place some hours before After-birth, which was partly in the vagina, was removed under narcosis and the uterus washed out and tamponed with iodoform gauze This was removed on the second day From the second day to the seventh day the temperature was 39 Frequent irrigation of the uterus with 2 per cent carbolic acid solution On the eighth day a chill Temperature 40 pulse 144 Murmur at heart apex Chills on the eleventh twelfth, thirteenth, fourteenth and fifteenth days, with temperature between 37 and 40, pulse rapid, unaccountable On the sixteenth day swelling of the left leg with recognizable thrombus Death on the seventeenth day

Autopsy puerperal fever, endometritis placentaris suppurative thrombo-phlebitis, syphilitic cicatrices of the kidney, varicosa endocarditis Observations This was a slow infection and offered every hope that recovery would have followed hysterectomy on the eighth day

6 A primipara, 24 years old Some days before confinement, a chill as the result of attempted abortion Spontaneous discharge of the dead fetus, (25 5 c m 340 g) Temperature 38 9 On the third day a chill, temperature 39 On the fourth day, after an irrigation of the uterus, three chills Splenic tumor, vomiting, tympanitic abdomen Pronounced peritonitis Temperature 40 until the eighth day On the ninth day no fever On the tenth death

Autopsy the site of the placenta covered with a grayish-black ichorous mass The cervix was gangrenous, with two furrows, both on the posterior lip, extending from the vagina to the body (Marks of abortion) Puerperal sepsis, general fibrinous and purulent peritonitis, endometritis placentaris, gangrene of the cervix uteri, gangrenous right oöphoritis, recent parenchymatous myocarditis and hepatitis, nephritis hyperplasia of the spleen, right adhesive pleuritis, purulent thrombo phlebitis Observations This case offered hope of recovery after hysterectomy on the fifth day or earlier The history is too incomplete to indicate the time of latest hopeful operation

7 Primipara, 25 years old Moderate laceration of the cervix, normal birth under midwife Normal course until fifth day when fever and high pulse came on and continued until the eleventh day On admission, exudation in right parametrium Twelfth and thirteenth days normal temperature On the fourteenth renewed fever, with intermission daily until the eighteenth, then a remittent high fever, pleuro-pneumonia, dyspnea, until death on twenty-sixth day No symptoms of peritonitis, no chills Autopsy puerperal fever parametritis and perimetritis, multiple and purulent, subinvolution of the uterus, double hydrothorax beginning double fibrinous pneumonia, hepatitis, nephritis, myocarditis, gastritis, right hemorrhagic pyelitis Observation This case offered great hope of recovery by hysterectomy on the seventeenth day

8 Primipara, 20 years old, normal birth of a full-sized boy (52 c m , 3,000 g) Distension of abdomen immediately after delivery An area of dullness appeared on the third day, on the right side of the uterus, as large as the hand Regular course of sepsis to the eighteenth day, when death ended it

Autopsy ichorous peritonitis, endometritis, edema of the lungs, hypertrophy and dilatation of the heart, right pleuritis and right catarrhal pneumonia, nephritis, hepatitis and splenitis Observation This case should certainly have been saved by hysterectomy on the sixth day

9 Normal birth normal until fourth day Temperature then 39 5, rapid pulse, abdominal pain, irrigation of uterus on seventh day chill, with temperature 40 Digital removal of a large piece of placenta, iodoform tamponade, frequent irrigation of the uterus, on the fifteenth day evidence in urine of nephritis, on the twentieth day pupillary hemorrhage of right eye, on the thirty-second day edema of the lower extremities, on the forty-eighth day death

Autopsy puerperal fever, parametritis with right throm-

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5 Hünermann Charité Annalen, eighteenth year, p 515

bo phlebitis, bacterial nephritis, cerebral thrombo-phlebitis multiple Observation This case could have been saved by hysterectomy on the fifteenth day and perhaps later

10 Spontaneous birth of an average child (41 cm 1320 gr) Considerable hemorrhage, manual removal of placenta High fever during the first day On the second day infiltration of right lung, on the eighth day of the left lung Double pleuritic effusion On the tenth day peritonitis and death

Autopsy uterus bicornis Endometritis, universal purulent peritonitis, double fibrinous pleuritis, partial pulmonary atalectasis Observation It is hard to say whether or not hysterectomy would have helped this case

11 Normal birth on the third day of a child temperature 38 6, pulse 96, on the fourth day a chill, temperature 40 9 pulse 120 On the tenth day a pyemic abscess of the left thigh, many other abscesses, death on the thirty eighth day

Autopsy puerperal sepsis, pulmonary edema, multiple phlegmons, diabetus sacralis, marasmus Observation It seems that hysterectomy was indicated on the sixth day

12 Normal labor, sepsis began on the fourth day, death on the fourteenth day Poor history

Autopsy puerperal sepsis, ichorous endometritis, thrombosis plexi pampiniformis, phlegmonous oöphoritis, diffuse fibrinous peritonitis, fibrinous and purulent left pleuritis Observation This case was one very strongly demanding hysterectomy It should have been done before pleuritis came on

12 The birth was normal, but there was great hemorrhage with icterus on the third day, with an infiltration of the left arm This was incised It discharged no pus but an edematous fluid On the fifth day a chill, on the ninth day parotitis Death on the tenth day

Autopsy puerperal sepsis, suppurative and fibrinous meningitis, phlegmonous oöphoritis, anemia, icterus gravidus Observation It does not seem likely that hysterectomy would have helped this case

Hochsetter[5] had during the year 1,719 confinements and 21 deaths

Puerperal fever, five, rupture of uterus, one, eclampsia, twelve, chronic nephritis, one, collapse, one, heart failure, one, total, twenty one

Septic infection with recovery 10, phlegmasia, 1, metritis, 17, perimetritis, 5, light puerperal fever, 104, fever from known cause, 46, total, 183 10 6 per cent of all Of these cases, 98 had syphilis

1 Multipara, age 38, eighth birth Two last births child was turned, owing to transverse position On admission, temperature 37 8, pulse 120, pelvis flat, abdomen lax and pendulous head retracted toward right, heart beat below navel, os admits two fingers Patient stated that waters had passed on previous day, consequently examined by midwife No pains, patient placed on right side, abdomen supported, producing appearance of head in os Following day no pain normal temperature Second day, morning temperature 37 8, evening temperature 38 9, pulse 104 to 110 No labor pains Pain in right inguinal region Third day, temperature 39 4 and stinking lochia, no tympany of uterus, chills, and temperature 41 Pains, extraction of child nearly dead, irrigation of uterus, fall of temperature, manual removal of placenta on account of profuse hemorrhage and weakness of patient, irrigation of uterus No hemorrhage, iodoform tampons in uterus and vagina Tampons removed on following day, temperature 38 to 38 5 Fourth day, chills and high fever, remittent, then continual, twenty nine chills Thirty sixth day after birth, death occurred

Autopsy diphtheritic endometritis, gangrenous, phlegmonous right parametritis Right ovarian thrombo phlebitis, thrombo-phlebitis of left renal vein and vena cava, multiple metastatic pneumonia Hyperplasia of the spleen, ulcerative endocarditis Observation Abundant time for hysterectomy

2 Primipara, 22, pelvic measure 25-27 5-30-17, 5-10 First stage of labor on first day, second day chills, temperature 39 9, pulse 120, contracted uterus, heart beats 192 to 200 stinking lochia Extraction of child with instrument, foul smelling child, irrigation of uterus before and after spontaneous expulsion of placenta, fever intermittent, then continuous, constant irrigation no relief, five chills, spleen, tumor and right sides parametric exudate Twenty-first day after confinement, death

Autopsy peritonitis, adhesive and purulent double left parametritis with phlegmons, diphtheritic endometritis, gangrenous metritis, thrombo-phlebitis, parenchymatous nephritis Observation Abundant time for hysterectomy

3 Multipara, 28, seventh birth Admitted after delivery of dead child on previous day Suffering from large condylomata Placenta ejected by pressure on abdomen, then removal Third day fever, irrigation of uterus, many coagulated blood masses removed from vagina, foul smelling, injury of vagina to left of cervix, irrigation of uterus continued, curettage, removal of decidual remains Temperature 37 6 to 38, pulse 110 to 120, ninth day chills temperature 39 3, profuse hemorrhage from genitals, digital exploration of uterus, removal of large piece of decayed placenta, irrigation of uterus Fourteenth day, death

Autopsy diphtheritic endometritis, parenchymatous nephritis, hepatitis, myocarditis, fibrinous right pleuritis, right hydronephrosis Broncho-pneumonia of the right lung Observation Abundant time for hysterectomy

4 Fourth day chills, temperature 40, high fever with moderate pulse Ninth day, to right of uterus painful resisting mass, lochia stinking Fifteenth day, incision of gluteal abscess, swelling of knee joint Two incisions on fourteenth day with much pus, fever continuous, few days later two abscesses opened on nates, twenty fifth day removed to other hospital, death four weeks after

Autopsy chronic suppurative perimetritis, psoas abscess, several para articular abscesses about the right knee joint and right shoulder joint parenchymatous nephritis and hepatitis Observation Hysterectomy should have been performed on the twelfth day

5 Primipara, 24, fifth day after delivery, chills, fever 40 5, pulse 132, irrigation of uterus, no result, continued high fever Sixth day, abdomen tender on pressure and distended, peritonitis Death on eleventh day

Autopsy suppurative and fibrinous peritonitis, parenchymatous, myocarditis, hepatitis, nephritis and gastritis, erysipelatous endometritis and edema of the parametrium Observation Hysterectomy should have been done on the sixth day

CONCLUSIONS

1 Puerperal sepsis still causes almost one-half the deaths occurring in the puerperal state

2 The causes of puerperal infection are the same as the causes of other wound diseases and should be treated on the same principles

3 Curetting and irrigation are unavailing when the infection has passed outside of the endometrium and submucous connective tissues of the uterus

4 The removal of the uterine appendages for infection outside the endometrium leaves behind the infected uterus from which the septic process goes on

5 Removal of the uterus and its appendages should be performed when puerperal sepsis has gone beyond the endometrium

6 The indications for hysterectomy in puerperal sepsis seem to be these (*a*), curetting and uterine irrigation and tamponade have failed, (*b*), peritonitis or pelvic cellulitis is present, (*c*), hopeless localization of infection outside the pelvis can not be found

7 Hysterectomy may not be helpful in the course of diphtheritic vaginitis and endometritis

8 Hysterectomy may not be available in cases of rapid early infection

9 Hysterectomy may not be helpful in cases of septic phlebitis reaching outside the pelvis

10 The method of operating will depend (*a*), upon the size of the uterus, (*b*), upon the condition of the uterine tissues, (*c*), upon the experience or choice of the operator

11 Except in early operations in which the uterus is still large and therefore difficult to manage through the vagina, the vaginal method with the clamps will be preferred because it is a more rapid method it is less objectionable in the public mind and it furnishes the best possible drainage

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[5] Hochsetter Charite Annalen nineteenth year 1892-93

ROSS O SIDNEY, M D, of Brooklyn, died October 31, in his seventy fourth year from a brief illness by pneumonia He was for twenty five years a resident of Brooklyn, and at one time prominent in political affairs He was an alumnus of the class of 1848 of the University of Pennsylvania

JOHN LLOYD ZABRISKIE, M D, of Brooklyn, N Y, died suddenly while away from his home on the 11th inst, in his sixty fifth year He was the eldest son of Dr John Barren Zabriskie who married Miss Abby Lefferts Lott of Flatbush, a member of one of the oldest families on Long Island, she died in 1848 John Lloyd Zabriskie was born on August 26, 1841 in the old house of the Zabriskie homestead, which stood until a few years ago at the corner of Flatbush Avenue and Church Lane, just in front of the present family residence It had stood there for two hundred and twenty-five years and was the oldest house in Flatbush His early education was acquired at Erasmus Hall Academy He then entered Columbia College and took a literary course After graduating from Columbia he studied medicine with Dr J M Ingraham of Flatbush, who had been his father's most intimate friend and at the same time attended lectures in the New York Medical College and was graduated in 1863 In 18[illegible] he married Miss Eliza B Garvin, and their union has been a most happy one The friends of the dead man say that there was not in all Brooklyn a home more refined, more hospitable or more exemplary as to the purity and peacefulness of the family life than the Zabriskie home Although a busy physician, Dr Zabriskie found time to indulge his fondness for music He had a cultivated voice, and was an accomplished performer on the violin His sunny disposition, his kindness, sociability and his sincerity made him good friends everywhere He was a member of the Kings County Medical Society, consulting physician at the Kings County Hospital, a member of the Board of Education, an elder of the Dutch Reformed Church and a member of the Knickerbocker Field Club He had for many years been identified with the Medical Board of the Long Island College Hospital He has left a widow and three children, of whom two are sons who have elected to follow their parent in the medical profession One of the sons is at present studying pathology at the University of Berlin The cause of Dr Zabriskie's sudden demise is set down as heart disease, culminating in angina pectoris The profession has lost in Dr Zabriskie one of its stanchest and sincerest supporters

PUBLIC HEALTH

The Pasteur Institute of New York and Its New Serum Plant — It is reported that an out-of-town extension of this Institute will be made The conductors have made a purchase of thirty five acres near Tuxedo, on which will be established an experiment station It will be stocked with cows, horses, sheep, mules and goats, which will be bred with the express idea of producing antitoxin for the prevention of cancer and diphtheria This substance sells for a high price and its manufacture will be very profitable The station is well located, and one of its features will be a house in which the patients of the Institute will be treated A new station is to be established on the Erie Railroad near by, which will be known as Pasteur

A Miniature Hospital in the Home —In the *Practitioner* for September, Dr Malcolm A Morris, of London, favors the proposition that in planning a house, regard shall be had for the future needs of the occupants in the time of sickness His recommendation is that one room should be set apart in design as the sick room This room should be shut off as much as may be from the common atmosphere and common noises of the dwelling—or, rather, it should be so arranged that it can be shut off at any time—and there should be a bath room and water closet close at hand The walls and floors and other surfaces should be impervious, so as to harbor no impurities and to admit of ready cleansing, and the furniture and fittings should be simple, with the same object If in addition there should be a second room available for the nurse's use, the essentials for the proper seclusion of infectious cases are provided, as far as possible in a private house. A miniature hospital is then ready at hand, and at ordinary times it can serve as a spare room or even as a bedroom in regular use, differing only from any other room in its adaptability to the special purpose in question This plan should be especially welcome to the paterfamilias in whom the home feeling is active, and whose olive branches sprout out thick and fast To such an one the little private ward may be a positive and blessed economy in saving the doctor's bills that are apt to pile up where the children's diseases—as they are improperly called—take a run through the family This incentive is apart from the higher economy that may also take place, namely the saving of the lives of some of the juniors of the family

Health Reports.—The following health reports have been received by the Supervising Surgeon-General, Marine-Hospital Service

SMALLPOX—UNITED STATES

Michigan Detroit and Rochester, smallpox reported November 9

SMALLPOX—FOREIGN

Glasgow, October 19 to November 2, 9 cases
London October 19 to November 2, 5 deaths
Naples October 19 to November 2, 6 cases, 6 deaths
Odessa October 19 to November 2, 6 cases, 1 death
Warsaw October 12 to 19, one death
Montevideo October 5 to 12, 5 cases, 3 deaths
Buenos Ayres August 1 to 31, 41 deaths
Dublin October 26 to November 2, 3 cases, 1 death
Buda-Pesth October 21 to 28 2 cases
Calcutta September 21 to 28, one death
St Petersburg, October 19 to 26, 3 cases, 3 deaths

CHOLERA

Bombay October 8 to 15, 2 deaths
Calcutta September 21 to 28, 35 deaths
Yokohama September 20 to October 11, 10 cases, 9 deaths.
Austria Hungary, October 15 to 21, 57 cases, 32 deaths
Russia Volhynia Govt September 1 to 7, 4 237 cases, 1 668 deaths, September 8 to 15, 8 554 cases, 1,417 deaths, Podolia Govt, September 1 to 15 51 cases, 10 deaths, Primorstajahezirk (Siberian Russia), July 30 to September 18, 82 cases, 58 deaths
Egypt Damietta, October 11 to 16, 15 cases, 8 deaths

YELLOW FEVER

Cuba Santiago October 26 to November 9, 29 deaths; Sagua la Grande, October 26 to November 2, 8 cases, Cienfuegos, November 3 to 10, 1 death

BOOK NOTICE

The Diseases of Children's Teeth, their Prevention and Treatment A Manual for Medical Practitioners and Students By R DENISON PEDLEY, M R C S, L D S, F R C S Illustrated 8vo, cl London J P Segg & Co Philadelphia The S S White Dental Mfg Co

This work is intended to supply information on the nature and treatment of diseases of the teeth to students and general practitioners of medicine More particularly, says the author, for those who "settle down in the country where the area of practice is wide and the opportunities of obtaining skilled dental assistance are few " Notwithstanding the fact that it was particularly intended for the especial class mentioned, yet it is evident on inspection, that the work may be read by many dental and oral surgeons with profit While American dentistry has forged ahead in the international race for superiority with gigantic strides, still we suppose our practitioners may be interested in the elementary work of our British cousins—but the general practitioner of medicine who can not and does not wish to reach the high plane of the metropolitan dentist, will find that there is very much to interest and instruct him in this little volume, indeed we scarcely know what other work "fits that particular niche" with such nicety

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On receipt of the subscription the weekly JOURNAL of the Association will be forwarded regularly

Gentlemen already members of the Association should send their annual subscription to the Treasurer or direct to the JOURNAL office

All communications and manuscript of whatever character, intended for publication in the JOURNAL, should be addressed to the *Editor*, and all communications relative to the business of the JOURNAL, proof sheets returned or in regard to subscriptions, should be addressed to *THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 86 Fifth Avenue*, Chicago

SATURDAY, NOVEMBER 23, 1895

POST-TYPHOID BONE LESIONS

Typhoid fever may have many sequelæ, and not the least interesting and important of these are the post-typhoid bone lesions which have attracted considerable attention, both before as well as after the discovery of the specific cause of typhoid fever As would be naturally expected, the identification of the EBERT-GAFFKY bacillus as the specific cause of typhoid fever has been followed by a thorough investigation of the post-typhoid bone lesions and the results have established an undoubted relation between them and the primary typhoid attack

EBERMAIER[1] obtained the bacillus of EBERTH in pure culture from two instances of suppurative periostitis following typhoid fever ORLOFF[2] and ACHALME[3] found the same bacillus in pure growth under the same conditions Others have made similar observations PEAN and CORNIL[4] describe necrosis of the tibia, occurring eight months after recovery from typhoid fever, in which the bacteriologic examination showed the typhoid bacillus associated with other organisms, and FASHING[5] and E FRAENKEL[6] both found the typhoid bacillus associated with pyogenic microbes under *similar conditions* Then there are also examples of post-typhoid bone affections associated with the pyogenic cocci only Such post-typhoid inflammatory and suppurative lesions in the bones may consequently be produced by the ordinary or less common pus microbes alone or associated with the bacillus of typhoid fever and careful investigations have also shown that they may be caused by the latter microorganism alone

Naturally, the question of the pyogenic properties of the typhoid bacillus is of much interest in connection with the sequelæ ORLAFF[7] and ADENOT[8] both caused suppuration in dogs and rabbits by the subcutaneous inoculation of pure cultures of the typhoid bacillus More recently this problem has been subjected to an elaborate experimental investigation by DMOCHOWSKI and JANOWSKI,[9] and these workers reach the apparently incontestable conclusion that there is no animal tissue in which the bacillus typhosus may not cause suppuration under suitable conditions Inasmuch as the pyogenic staphylococci and streptococci cause suppuration in various tissues only under what may be called suitable circumstances, it follows that the typhoid bacillus is similar to them in this respect, and it may be said that it is now settled beyond all doubt that the bacillus of typhoid fever when in possession of a certain degree of virulence, possesses distinct pyogenic properties

A satisfactory explanation of the occurrence of bone lesions after typhoid fever has not as yet been advanced, but many valuable observations bearing on this point have been made Thus QUINCKE[10] demonstrated the presence of the typhoid bacillus in the spleen and the bone marrow, especially the ribs, as late as the seventh week of the disease In nine cases examined, eight showed the organism in the rib marrow It has also been shown that this bacillus has a very marked tenacity of life outside of the body Now these points certainly throw some light on the development of post-typhoid bone lesions at periods long after the attack of the febrile disease, but the causation of a distinct necrosis in one instance and not in another is the problem that baffles all efforts at explanation

Very recently PARSONS[11] reviews this subject of post-typhoid bone lesions and describes six cases observed in the surgical clinic of the Johns Hopkins Hospital Four of these six cases were in men and two in women The period after recovery from typhoid fever at which the lesions appeared varied from one to sixteen months The character of the typhoid attack did not bear any relation to the occurrence of the bone changes It is interesting to note the general fact that the symptoms of the bone infection, almost without exception, come on some time after convalescence has been well established In one case[12] only did the bone changes manifest themselves during the course of the fever In PARSONS' *cases the lesions* were situated in the ribs or the costal cartilages in three instances, in the tibia once, once in both tibiæ, and once in the left radius and the right tibia

From the cases described in the literature it appears that almost any bone in the body may be involved, but that the tibia is undoubtedly the bone of choice, the instances in this situation greatly predominating, whereas the hands and the feet are remarkably free

From the bacteriologic notes accompanying the cases described by PARSONS, it is seen that the typhoid bacillus was present in pure culture in four out of the five cases that were examined, the remaining case was one of mixed infection, a focus in the radius showing the typhoid bacillus associated with the staphylococcus pyogenes citreus, and a focus in the tibia the staphylococcus pyogenes aureus only

Usually, the first symptom of a post-typhoid bone lesion is pain Sometimes this will be complained of while the patient is still in bed convalescing from the typhoid fever, at other times the pain will appear soon after getting up and about The pain is usually localized and almost invariably involves the region subsequently the seat of the necrosis This pain has been likened to the bone pains of secondary lues Usually, this pain subsides and may leave a little soreness over the formerly painful spot Simultaneously with the pain, a slight swelling usually occurs which disappears with the subsidence of the spontaneous pain Now, in some cases the trouble soon recurs with pain, swelling and indications of necrosis, in others this may be delayed for months, in other cases, again, there may be repeated exacerbations and remissions that never seem to be followed with necrosis As a rule, there is an entire absence of fever, and the clinical course is marked by a peculiar chronicity

In one of the cases described by PARSONS, the swelling that formed underwent resolution, it had appeared during convalescence just above the left costal margin, eight months post typhoid it again appeared and subsided to make its third appearance about one year after the onset, after which it disappeared again leaving a painless induration

The chronicity of this post-typhoid process in the bones, which seems to be a characteristic feature especially of those cases that are found to be due to a pure infection with the typhoid bacillus, has caused it to be considered by some as analogous to the cold suppurations of tuberculosis and the necrosis of syphilis Histologic examination of the diseased tissue has failed to reveal anything that could be considered characteristic of, or peculiar to, these lesions, although some authors speak of the changes due to the typhoid bacillus as partaking more of the nature of a pure necrosis than of typical suppuration as shown by the examination of the pus, the usual appearances under the microscope show a marked round cell accumulation with a greater or less leucocytic infiltration

The diagnosis of such cases would rest largely upon the history of a previous typhoid fever, or perhaps of some indefinite continuous fever The occurrences of inflammations in bones during or after convalescence is suggestive of a pure typhoid infection, whereas the mixed infections in bone and soft parts, and the typhoid infections in the soft parts are seen more frequently during the course of the disease

As a rule, the prognosis is good, although a fatal case of disease of the femur showing association of typhoid and colon bacilli has been reported by KLEMM[13]

Complete excision of all the diseased and suspected tissue appears to be the most satisfactory treatment Mere excision is not sufficient, because it has been so often found that the microorganisms will persist in the wound for an almost indefinite length of time

THE PHYSICIAN IN OREGON

The legislative assembly of the State of Oregon, in its 1895 session, passed a new law for the regulation of the practice of medicine and surgery, which, in some of its features, is of more than local interest Among other things, it provides that the Governor shall appoint five persons from among the most competent physicians of the State, all of whom shall have been residents of the State for seven years and of at least five years' practical experience in their profession, who shall be known as the Board of Examiners for the State of Oregon Three of the board shall be regulars, one "eclectic" and one "homeopathist" The full term of office is five years The board is required to hold meetings for examination on the first Tuesday of January and July of each year, at Portland, and it may call special meetings when in the opinion of a majority of the members it is deemed necessary

Examinations shall be in anatomy, physiology, chemistry, materia medica, therapeutics, practice of medicine, surgery, obstetrics, diseases of women, medical jurisprudence and such other branches as the board shall deem advisable They must be both scientific and practical, and of sufficient severity to test the candidates' fitness to practice medicine and surgery They may be by written or printed, or partly written and partly printed, questions and answers

The board may refuse or revoke a license for unprofessional or dishonorable conduct, subject, however, to the right of the applicant to appeal, from the decision of the board, to the circuit court And before a license can be revoked, a complaint of some person under oath must be filed in the office of the secretary of the board, charging the acts complained of, the accused must be served with a written notice and copy of such complaint, a time and place for hearing thereon appointed, and stated in the notice, and the accused be given an opportunity to appear and

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[1] Deutsches Archiv für Klin Med , Bd XLIV
[2] Centralb für Chirurg 1889
[3] La Semaine Medicale, J X, 1890
[4] Bull de l'Academ de Med 1891
[5] Wien Kl Wochenschr , 1892
[6] Baumgarten s Jahresbericht, VI
[7] Loc cit
[8] Arch de Méd Experimental, J 1
[9] Ziegler's Beiträge, XVII, Bd , Heft II
[10] Quoted by Parsons, Annals of Surgery, vol XXIII, No 5
[11] Annals of Surgery, vol XXII, No 5
[12] Ebermaier, loc cit
[13] Arch für Kl Chir , Bd XLVII

defend himself, personally and by counsel, have the sworn testimony of witnesses taken and present other evidence in his behalf

The words "unprofessional" or "dishonorable conduct," are declared to mean 1, the procuring or abetting in procuring a criminal abortion, 2, the employing of what are popularly known as "cappers" or "steerers," 3, the obtaining of any fee on the assurance that a manifestly incurable disease can be permanently cured, 4, the willfully betraying of a professional secret, 5, all advertising of medical business in which untruthful and improbable statements are made, 6, all advertising of any medicines, or of any means whereby the monthly periods of women can be regulated, or the menses reestablished if suppressed, 7, conviction of any offence involving moral turpitude, 8, habitual intemperance

The person receiving a license shall file the same, or a copy thereof, with the county clerk of the county wherein he resides, and in case he shall move into another county, he shall procure from the county clerk a certified copy of such license and file the same with the county clerk in the county to which he removes

The penalty for practicing medicine or surgery without a license, or contrary to the law, is a fine of not less than $50 or more than $100, or imprisonment in the county jail not less than ten nor more than ninety days or both such fine and imprisonment All fines are to be paid into the State treasury for the use and benefit of the common schools

Any person shall be regarded as practicing medicine within the meaning of this act who shall append the letters "M D" or "M B" to his or her name, or, for a fee, prescribe, direct or recommend for the use of any person, any drug or medicine or agency for the treatment, care, or relief of any wound, fracture or bodily injury, infirmity or disease, provided, however, the act shall not apply to dentists in the practice of their dental profession

THE CRIMINAL BRAIN NOT NECESSARILY DEGENERATE

At the Philadelphia Academy of Natural Sciences the subject of degeneration was discussed recently by the Section on Anthropology **Dr Charles K Mills** presented the brains of three murderers and demonstrated in them the abnormalities in the course and development of convolutions and fissures, apparently showing a reversal to the brain conformation of anthropoid apes Two of the murderers were insane, which also was indicative in the mind structural peculiarities

Dr M V Ball dwelt upon the distinction between the "degenerate" and the "atavistic" brain, the former being pathologic, the latter the result of reversion to a lower type Idiots, insane and epileptic subjects belong to the degenerate class, while, according to **Lombroso**, born criminals are the result of a halt in evolution, or what is termed reversion Some criminologists maintain the view that the changes are due to faulty nutrition, and as criminals are usually of the pauper classes, the fault, in that case, would be primarily social

Prof D G Brinton declared that because a man's brain showed characters of a lower type, it need not be inferred that he was necessarily criminally inclined The lower races are often as ethically elevated as many civilized races, and furthermore, men of honest habits may possess brains exhibiting the anomalies referred to Crime is not so much the result of anatomic, as it is of social conditions, if it were solely physical, we could do little toward improvement, whereas we know that crime can be reduced by better social advantages and an improved environment

Professor Cope expressed his belief that physical organization does control action, but an unfavorable environment acts by developing degenerate and physically inferior individuals Society may do much toward improving the human race by preventing the physically degenerate from reproduction

Prof L Witmer exhibited a cast of the brain of **Laura Bridgman**, who in the physical sense was a degenerate, though morally and intellectually of high culture and development Some of the characters of the alleged criminal brain were present, and there was deficient development of the centers in the cortex where the faculties of sight, speech and hearing have been located, showing that degeneration here was to be traced to disease of the sense organs

Prof Ernest Laplace said that he had examined the brain of **Gambetta** shortly after his death, and though a very small brain, comparable in size to that of an idiot, it was strongly developed in the region of the speech centers, which corresponded with his great oratorical ability during life Criminality, according to **Professor Laplace**, is an exaggeration of selfishness, and he suggested that a center for selfishness may some time be determined

Prof Harrison Allen spoke of the non-permanence of peculiarities of brain structure, and said that they constantly tend to return to an earlier type of formation Man is a domesticated animal and like other domestic animals has a tendency to revert to a more primitive condition He maintained that because ape like characters are found in a brain, we have no right to assume that the person's actions during life were ape-like any more than we have to assert that those which showed features which are found in the hog are necessarily hog-like The brain may exhibit apparent abnormalities or peculiarities without proving anything against the moral character or mentality of the owner

THE CORRESPONDENCE OF THE INSANE

The latest report of the New York State Commission in Lunacy contains two letters from the Assistant Postmaster General, giving the opinion of the Department in regard to rights of the insane, and others under legal detention, in the matter of their correspondence The question often arises with asylum physicians as to how far they are justified in withholding or examining letters sent to inmates when, for good medical or other reasons, this seems imperative or advisable According to the ruling of the Post office Department, they have the right to withhold letters from patients when it seems necessary to do so, but the right of examination is not specifically stated though it seems to be inferred by the New York Commissioners

The safe statement of the case seems to be thus the legal and natural guardians of the lunatic, and lacking such the asylum authorities, have the full right to say whether or not he shall receive letters, but whether they can open and inspect them without his consent, may yet be a question for decision by the Department

As regards the sending of insane patients' letters, there should be no legal question—it ought to be left entirely to the judgment of the physician in charge Some years ago, it is said a recovered patient in England brought suit for damages against a doctor for mailing his insane correspondence, and it is not hard to see a possible reason in his complaint There is, nevertheless, an almost perennial movement in our various State Legislatures for enlarging the freedom of the insane in this direction For example, a few years ago, a bill was introduced into the Illinois Legislature to allow every inmate of a State hospital to select a correspondent with whom all communications either way should be inviolate The bill had perhaps a fair prospect of becoming a law until its possible consequences were practically demonstrated by samples of insane correspondence to the committee that had it in charge

The chances for serious consequences from too lax an oversight of the letters sent out by lunatics are real, and very serious mischief has been done in this way A few years ago, the authorities of the Willard Asylum were embarrassed by the arrival of a whole family from Europe who had broken up their home, sold out their interests and came there on the representations of a megalomaniac inmate, only to find themselves the victims of the delusions of a lunatic The still more probable possibilities of libelous statements and improper communications are also to be borne in mind, as well as the mortification any right minded person would feel on recovery or in lucid intervals, in knowing that such evidences of his disorder had been allowed to go abroad It was this last consideration that was the basis of the English suit already referred to, as stated in the account of the case given at the time

The matter is one that is of interest, not merely to asylum officers, but to any medical man who may be consulted in regard to the management of the insane It is well that, in view of the coming legislative sessions, medical influence and opinion should be firmly against any pseudo-philanthropic measures that are against the best interests of those they are ignorantly intended to serve

THE MEETING OF THE TRUSTEES

The semi-annual meeting of the Board of Trustees was held November 16 Only two members were absent and the meeting was a harmonious one All regretted that the illness of Dr Reeves prevented his attendance The Treasurer's statement showed a larger balance in the Association treasury than for several years past, and the editor's report, printed in another column, told the story of the year's prosperity The Board took measures for increasing the number of subscribers, and the membership of the Association, and for the betterment of the equipment of the Journal The allowance of $400 for the expenses of the Committee on the Department of Public Health was made in accordance with the resolution of the Association at the Baltimore meeting, and will furnish that committee with a sum sufficient to carry on an active canvass during the winter

The great improvement in the Journal and its affairs will not induce the management to remain quiet, but, on the contrary, only operates to encourage renewed effort The Association, in founding the Journal, had no intention of making it a commercial enterprise, and the only legitimate object of the money in the treasury is to make the Journal better and better, as fast as its funds will allow, so that the members may receive the benefit in the form of an improved publication

Our readers will be glad to know that Secretary Atkinson has completed a card index to the first twenty volumes of the Journal, and the Trustees have ordered it printed in book form, which will be sold at a nominal price

This index will follow the index to the thirty volumes of the Association, issued by Secretary Atkinson when the annual volume of Transactions was suspended and the publication of the Journal wa begun by a Board of Trustees with N S Davis Sr as editor From that day to this, there has scarcel been a break in the steady progress of the Journa of the American Medical Association, and we ca truthfully say that, notwithstanding the great finan cial depression of the past three years, few busines enterprises have prospered more than our Journal Let the fact, as it stands, encourage the members t go on with the good work of organization, until ou Association stands first in membership of any in th world, as it is now first in America!

CORRESPONDENCE

A Case of Malignant Hemorrhagic Malaria with very Large Spleen

Elgin, Ill , Nov 15, 1895

To the Editor —With the permission of Dr J F Bell, I wish to report an interesting case of hemorrhagic malaria in which I was called in consultation

W M , male, age 25, recently from a malarial region of Kentucky and for years a victim of that disease He has had several chills during his three weeks' residence here, of the remittent form October 27, last, the patient left the house feeling very well, not having had a rigor during the last week While waiting in the depot for a train to Chicago, he suddenly became quite sick He struggled back to the house and on reaching it he fell to the floor, complaining of pain, and also had a chill Dr Bell was called, and found the patient in a delirious state, temperature 104, pulse 130, strong and full , palpation and pressure over the spleen and liver was resisted by the patient , percussion revealed increased dullness of both organs , the Doctor prescribed quinin in large doses frequently, sponge baths and opium as a sedative I was called a few hours later and found that the patient had passed a very large quantity of sanguineous urine, had also vomited a fluid substance of a very blackish hue The vomited matter was not saved, so could not tell what the nature of it was His temperature had increased to 105, fluid extract ergot ʒss doses every two hours ordered *for the hematuria Dr Bell called again about four hours* later, patient being no better, fever and hematuria still persisting I saw him at 9 30 that evening with Dr Bell Temperature was 105 5, pulse 140, skin very hot and slightly icteric, sclera yellow He was quite restless and still delirious His brother exhibited a chamber vessel which was about half filled with sanguineous urine which patient had passed during the last five hours Pot bromid gr xv, chloral hydrat xv was ordered to be given every two hours until sleep was *produced The treatment of the morning* kept up and ice cap applied He passed a very restless night Dr Bell and I saw him several times during the next day During the early morning hours he became very much jaundiced, the entire body being of an intensely lemon yellow color Resorting to the various antipyretics, cold, enemas, ergot in smaller doses more frequently did not seem to check the temperature or hematuria He became so restless that restraint was required to keep him in bed, and was much worse about 3 p m , at which *time his temperature* per axilla was 107 25 with a quick running pulse He died at 4 15, thirty one hours after attack

I made an autopsy on the remains about twenty hours after death, assisted by Drs Albert Swartz and J F Bell, and found on external inspection a young man of great muscular development No emaciation, skin of a bright lemon hue, also conjunctivæ , rigor mortis very pronounced. Examination of the organs followed Pericardium contained a greater quantity of fluid than normal A stringy, colloid sticky and thickened material was found to extend into the aorta and after removing it was found to be about a foot in length and corresponded to the rounded shape of that vessel , insufficiency of aortic valve, otherwise heart was about normal in appearance weight and size Lungs were congested more marked on lower lobes Liver greatly enlarged, of a dark reddish brown appearance, capsule slightly thickened, on cut surface of a yellowish brown color filled with pigment, and cutting with more resistance than usual Gall bladder full of fluid no concretions , openings and ducts patent The spleen was nine inches in length, six and one-half in breadth and three inches thick, weight 1 630 grams, of a grayish-brown color , capsule not thickened The parenchyma, soft, of a dark brownish color and impregnated with pigment Kidneys enlarged, swollen and congested , capsule slightly adherent , cortical markings indistinct The medullary substance of a dark grayish-red color with scattered areas of pigmentation Stomach contained a quantity of dark greenish fluid Bladder also contained a quantity of sanguineous urine

I will add that the cutting of the skin was accompanied by a raw leather like resistance to the knife, also cutting the serous surface was like cutting cartilage

H J Gahagan, M D ,
Assistant Physician, Illinois Northern Hospital for Insane

A Specific for Spasmodic Croup

San Diego, Cal , Nov 16, 1895

To the Editor —Among the remedies for acute laryngitis suggested in a recent and elaborate contribution to the Journal, I am surprised that no mention is made of the oleoresin improperly called "balsam" copaiva I regard its employment as quite an advance on the antiquated ipecac, turpeth mineral, *et id omne genus* treatment, and for many years I have used it to the exclusion of all such Preferably, it should be given in a full dose of 15 or 20 drops to a child 2 or 3 years old, at bedtime, or immediately following the first hoarse inspiration or cough This will generally carry the little patient through the night, or certainly until the early morning hour, when a recurrence of the paroxysm is often expected *En capsule* is the best method of administration, for the purpose of disguising the unpleasant taste The syrup of copaiva prepared by rubbing the oleoresin with calcined magnesia, and adding oil of peppermint and simple syrup, is an eligible formula Less so, is an emulsion with mucilage, yolk of eggs, or alkalies The required doses, however, are so few, and time often of such importance, that I commonly extemporize a combination of the remedy with sugar or molasses The element of fear of suffocation usually renders the little patient quite tractable, so that he gracefully submits to almost any form of medication at such times I can yet recall, *ad nauseam*, the not infrequent doses of ' hive syrup" of my youth

In the presence of a severe attack, I give the copaiva *imprimis*, and then transfer the child, if in a cold room, to the nursery or kitchen, where he is subjected to heat and steam A shawl thrown over the heads of nurse and child, as well as over the teakettle, is a ready method The first whiff of steam relaxes the spasm, if the remedy has not already done so, and the crisis is past The child should be detained in a warm room for the two succeeding days and nights, taking similar or smaller doses each evening upon retiring, and, if thought best, a few drops at intervals during waking hours

By this method the system is not relaxed with a tendency to contract additional cold and I am sure it will supply a long-felt want to paterfamilias if not to his progeny

C M Fenn, A M , M D

ASSOCIATION NEWS

Report of the Editor to the Board of Trustees

Semi annual Meeting held in Chicago Nov 16 1895

[Published by order of the Board]

TO THE PRESIDENT AND MEMBERS OF THE BOARD OF TRUSTEES

Gentlemen —I have the honor to report that since your last account the affairs of the Journal have progressed smoothly, the only serious annoyance being the difficulty of readjusting our plan of advertising Fortunately the Chairman of the Committee on advertising was easily accessible, and the cases in doubt were referred to him As a report may be expected from that member, I will not further dwell upon the subject, except to say that we are applying the Association rule absolutely with regard to all *new* advertisements Many old ones cheerfully furnished the formula, and those that have not furnished the formula, have been informed that the Journal could not renew their contracts without their full compliance with the rule I caused slips to be printed, of which the following is a copy

TO ADVERTISERS

The Board of Trustees adopted, and the Association by unanimous vote approved, the following order

"Hereafter advertising of medicinal preparations in the Journal shall be limited to those advertisers who furnish for publication in the Journal the official or chemic name and amount of each ingredient contained in the said preparation "

The Journal of the American Medical Association

This is sent to all advertisers and advertising agencies when inquiry is made concerning an advertisement

The value of advertisements that have been dropped under the rule, is $910

The value of advertisements that will not be renewed on account of the rule, is $2,388 10

Advertising orders refused, $345 60

The amount of changed advertisements by furnishing formulæ is $2,151 20

Contracts for $1,003 20 are being held awaiting action

The income of the Journal, May 31 to October 31, from various sources, is $10,683 34.

The regular issue of the Journal has now reached 6,200 copies, and last week was 6,400 It will be seen (from the detailed statement) that the receipts from subscriptions are growing steadily, but do not show the real amount nor the increase, as many of the new subscribers are transferred to the membership list within a few weeks after receiving the Journal The Treasurer of the Association receives the money from this class You will be pleased to note that the balance in the Association Treasury has been steadily increasing, and notwithstanding our increased expenses on account of enlargement of the Journal, the balance is larger than at any period in the last four years The eight page enlargement of the Journal last year proved inadequate to the relief from the pressure of manuscript, and another enlargement was made whereby the average number of pages of reading matter has been raised to fifty-two For the present, I think the Journal large enough, but sixty pages a week should be the eventual goal That will allow an increase of matter sufficient to prevent criticism on the part of those who are not interested in specialties and do not like to see so much space given them, by providing an abundance of reading matter for all

The increase in the subscriptions since the Baltimore meeting has been made by personal letters written by Dr Montgomery in Pennsylvania, similar letters written by the editor in accordance with a suggestion made by Dr E Fletcher Ingals, and by a traveling solicitor

The advantages of the plan of canvassing can scarcely be estimated in dollars and cents, for the work may give results months after the solicitor has made his visit Beside, most of the subscribers eventually become members of the Association We now hold applications waiting the receipt of the necessary remittance There have been very few discontinuances, a marked contrast from the conditions when I assumed the office

The property of the Journal office is now worth $10,000, a plant which has been wholly purchased within the past two years except the type An expenditure of $1,200 for new type, and $1,000 for new automatic folder, will be necessary during the next six months Much inconvenience would be saved the mechanical department by having the type asked for It is especially necessary when we run the large number of pages, as proofs must be sent to contributors and the type held An iron chest or cabinet for holding manuscript should be furnished, unless we move into a building having a vault

The quarters are entirely unsatisfactory We have to pay high insurance rates, and the persons in control of the building have not put it in repair as was agreed upon I request to be allowed to look for other quarters by the time of the expiration of the present lease in April next, or sooner, if arrangements can be effected without loss

The elevator service could scarcely be worse than it is now, and the shaking of the building when the machinery is running gives an impression of insecurity, which is confirmed if the window-sills and walls be examined

At my solicitation, the Secretary of the Association, Dr. W B Atkinson, has prepared a card index to the whole of the Journal down to December, 1894 The instructions of the Board do not say whether to print in the Journal or in book form In my opinion the index will be more convenient in a book The estimated cost of 1,000 will be about $500

I have to commend the employes of this office for their faithfulness and industry Seldom have I seen an establishment where every person employed seems to have a personal interest in the growth and success of the business, but I have to report that that feeling is the rule in this office, and I have frequently noticed their actual enthusiasm in promoting the success of the Journal within their respective lines

Finally, I have to thank the Trustees for their encouragement and support, and the patient attention given to the various questions coming before the office for settlement

Very respectfully, John B Hamilton, Editor

SOCIETY NEWS

College of Physicians of Philadelphia—A stated meeting of the Section on Ophthalmology was held in the Lower Hall, College of Physicians of Philadelphia, Oct 15, 1895, Dr. Wm F Norris, Chairman presiding Present, Drs Fenton, Harlan, Norris, Oliver, Ring, Risley, de Schweinitz and Zeutmayer, Fellows of the College, and Drs Keely, Leahman, McGuigan, Pancoast, Posey, Rogers, Schwenk, Shoemaker, Stevens, Thorington, Wetherill, Worrell of Terre Haute, Ziegler and Zimmerman as guests

Dr George de Schweinitz described a case showing angioid streaks in the retina, and exhibited a water color sketch of the ophthalmoscopic conditions

Dr Charles A Oliver gave a brief report of the history of a case of successful iridectomy and extraction of lens capsule and lens débris with recovery of vision in an eye that had been considered useless for more than ten years Dr Harlan gave a short account of a somewhat similar case where the accident dated back some thirty-three years, and in which the patient's vision was fully restored By invitation Dr P U K Schwenk read the details of Dr. Harlan's case

Dr S D Risley exhibited a new and compact case for ophthalmic instruments The case was made of aluminum and white mahogany and had adjustable compartments for sterilizing apparatus

Dr Oliver exhibited two cases, one of successful iridectomy for congenital zonular cataract, in which vision was increased for the first time in the patient's life, from finger counting at 35 centimeters to five thirty-fifths, and the other showing the final results of operative treatment in a case of subconjunctival dislocation of the lens, in which vision was restored to full acuity

The Section then went into executive session Upon motion adjourned Charles A Oliver, M D
Clerk of Section

Harrisburg Academy of Medicine—The formal opening of the Academy of Medicine, founded by the Harrisburg Medical Society, took place at Harrisburg, November 7, the new building, a roomy brick and brownstone structure, being crowded The program began with appropriate remarks by Dr E H Coover Dr John Curwen, superintendent of the State Hospital for the Insane at Warren and ex-president of the Dauphin County Medical Society, made a few congratulatory remarks Then Governor Hastings was introduced, and discussed briefly the relation of the medical profession to the Commonwealth The Governor always makes a good speech, and he was roundly applauded by the assembled doctors and their guests "Why a Community should support a Medical Library" was the subject of an interesting address by Dr H C Wood, professor in the medical department of the University of Pennsylvania He gave reasons in support of his subject and happily illustrated his points "Some Physicians in the Past Century of Dauphin County" was the subject of the historical address by Dr W H Egle, who gave brief sketches of the more prominent men in the medical history of the county and referred to their characteristics The formal exercises were closed with the benediction by the Rev Dr Stewart This evening at 3 o'clock, a banquet in connection with the opening of the Academy, took place at the Chestnut Street Hall, which was decorated for the occasion There were numerous toasts

MISCELLANY.

Tonsillitis of Malingerers—According to *Le Progrès Medica* the following unusual development of malingering has bee observed at a French garrison-hospital A French dragoo who was lying in the garrison at Compiègne, and who wante a vacation, persuaded a male nurse to blow a little powdere cantharides into his throat The result, the next day, was tonsillitis with pseudo membranes, and the patient was sent to the hospital He was treated for eight days, and then was discharged well No cause for the disease could be discovered, and as he was not sent home to convalesce as he had expected, the nurse fixed him another attack, but was taken sick at the same time The attending physician thought this mysterious and one day a tobacco pouch was found in the nurse's bed filled with cantharides powder The affair was brought before a military court, the nurse received six months' imprisonment, and the dragoon was sent to an African regiment

Union in Nerves by First Intention—According to the *Deutsche Medicinische Wochenschrift* for July 4, Gluck presented before the Berlin Medical Society the case of a child of a year and a half, operated on May 7, for extensive tuberculosis in the right radius In the operation the radial nerve was severed After careful disinfection the nerve was sutured and then the external wound closed Union of the wound by first intention resulted After fourteen days the first symptoms of restoration of the nerve were shown, and about four weeks later the functions of the muscles supplied by the radial nerve became normal It is believed this is the first recorded instance of primary union in human nerves Experimental investigations on animals show that after such nerve suturing, a portion of the nerve filaments retain their vitality

A Medical Contributor to Ethnology—Dr Walter J Hoffman, of the Smithsonian Institute's Bureau of Ethnology has given to the world a book, entitled ' The Beginnings of Writing," and intended to trace the first steps in the development of writing among the North American Indians Dr Hoffman has been a diligent student of American ethnology, was with Lieutenant Wheeler's expedition into Nevada and Arizona in 1871, post-surgeon in Dakota in 1872, when he was able to study the ethnology of the Sioux, and later, in connection with Professor Haydon's survey and in the Bureau of Ethnology, continued work and study among the American Indians The publishers' notice says "Professor Hoffman, one of the most successful workers in the field of American ethnology, presents the first steps in the development of writing, from tangible reminders like quipus and wampum belts, through picture writing to phonetic writing with an alphabet These first steps are described especially as they are shown among North American tribes Our native peoples made much use of reminders, they drew truly expressive pictures, they developed complicated systems of pictography, and some peoples of Mexico and Central America were passing from the use of ideograms to phonograms This transition period is most interesting" In clear and popular language, Professor Hoffman sets forth the latest results of scientific study and his references are illustrated with many helpful pictures

Lesions of Fatal Electrical Currents—An article in the *Lancet* for August 31, gives an abstract of a recent paper by Dr Kratter on this subject His report was made to the Styrian Medical Society The case examined by him was that of a workman who was killed by a shock received while he was occupied in stringing telegraph wires Post-mortem examination, performed twenty one hours after death, showed a ruptured blister on the left forefinger, marked rigidity and intense ecchymosis on the dependent parts of the body There was also hypervenosity of the blood, venous engorgement of the lungs extravasation of blood into the common sheath of both the carotid arteries and the vagus nerve, and symmetrical hemorrhage along the spinal cord If an electric current of 1,500 volts acts upon rabbits some of the animals live and others show typical symptoms such as tetanic contraction of all muscles and instantaneous stoppage of respiration, the heart, nevertheless, continuing to act There may also sometimes be found disorganization of the brain, with destruction of the peripheral parts of the cortex and intracranial effusion of blood The stoppage of the respiration lasts half a minute From these experiments it results that the first effect consists in permanent or temporary arrest of the respiration Death from electric shock is, therefore, a form of suffocation, and persons who meet with such an accident are to be treated by artificial respiration, as in ordinary cases of suffocation

Must Show Authority for Removal of Cadaver—"If any person without lawful authority, dig up, disinter, remove or carry away any human body," a statute of Iowa proclaims, he shall be punished, etc One night certain parties were apprehended while dragging a dead body on the ground by means of a rope around the neck and arm attached to a hack They were armed with revolvers, and had opened the grave and removed the body in a secret and clandestine manner On appeal from a conviction of one of the men, it was urged that the trial court erred in instructing the jury that, where one who has disinterred or removed a dead body from its resting place seeks to justify the act he must show that he had a lawful permit from the State Board of Health If it be conceded that it was error to direct the jury that the subject of disinterment and removal of the dead was under the control of the State Board of Health the Supreme Court of Iowa holds, in the case of State v Schaeffer, decided Oct 2, 1895, that the instruction was clearly without prejudice, because it was not incumbent on the State to prove the negative fact that the defendant had no authority to do the act And, even if that burden was on the State, the proof of the criminal intent and the want of authority was manifest from the manner in which the act was performed It was incumbent on the accused to show that he was not criminally liable for the act, because he was within the exception in the statute, if such were the fact

Obligation of Town to pay Physician—That a town may be liable on an implied contract for services rendered by a physician to a pauper seems to be well settled in Wisconsin Notice to one of the supervisors of the town also seems to be sufficient to create the contract But in the case of Beach v Town of Neenah, decided by the Supreme Court of Wisconsin, September 26, 1895, the town denied all liability The evidence was to the effect that the physician who brought the suit had seen the chairman of the board of supervisors of the town in relation to the matter, and told him that there were at that time four or five sick in the family in question, and that they were in need of everything, and that they would have to have help, that the chairman said that he would see to it that they should have whatever they needed, and that the chairman knew that this physician was attending the family, who thereafter continued to treat them as a physician In the circuit court a nonsuit was granted on the ground that this evidence failed to establish an express contract of employment But the supreme court reverses its judgment, and orders a new trial, holding that upon such evidence it was for the jury to say whether the supervisor so notified acquiesced in the employment of the plaintiff or impliedly agreed that the town should pay for his services after such notice

Meningitis in the New-Born Due to Umbilical Infection—In *Pediatrics* the above subject is reported upon briefly as having been discussed at a Section meeting of the New York Academy of Medicine

"Dr Ira Van Gieson reported the only two cases of acute exudative meningitis that had been observed in the new-born in the Sloane Maternity Hospital, as a result of infection from the umbilicus These cases were very carefully recorded, including the results of a bacteriologic examination On inspection there was no evidence of any abnormal condition about the umbilicus, but on dividing the umbilical vein, this vessel was found to contain pus Pure cultures of the streptococcus pyogenes were obtained from the meninges and from the umbilicus, and microscopic examination showed a severe acute exudative meningitis No other lesions were observed Dr Tucker said that he had seen several cases illustrative of this remarkable fact, that the pathogenic bacteria in their passage from the umbilicus may pass by certain viscera, and ultimately find a lodgment in some remote part The only effective treatment for these infections in the new-born was a prophylactic one, and this consisted in carefully dressing the umbilicus with a dry, clean powder Dr Fruitnight said that in the earlier years of his practice when moist dressings for the cord had been in vogue, he had seen suppuration of the umbilicus much more frequently than since he had adopted the practice of using dry dressings

Chinese Testimony Regarding the Japanese Red Cross—Colonel Cockerill, of the *New York Herald*, sends from Japan a narration by a Chinese officer concerning the operations of the Red Cross Society of Japan in its humane treatment of himself and other prisoners This narrative is in effect the involuntary outburst of gratitude of a man who has received kindness and entertainment from a supposed embittered enemy The writer is a naval officer having an American education, Tsoy Chan by name The following is a part of his manuscript

"In the Red Cross Hospital the patients were treated most kindly Plenty of milk and fresh eggs were given Rice, beef, fish, turnips and onions formed the ordinary diet Mr Mesaki was the superintendent of the hospital, and is a most conscientious man Unless on public business, he never left the hospital, and every night he went through the patients' quarters twice The head nurse was Mrs Tanaka, the wife of an officer, and a very energetic lady She was not afraid of work and did many kind acts to relieve the sufferers Ten other nurses were under Mrs Tanaka, all of whom had special duties at regulated times The nurses seemed to have administered to the patients with a sense of religious duty There were two or three Christians among them, the rest, adherents of Buddhism There were two young doctors who never left the hospital unless doing duty in the prisoners' lodge They took turns in the night watches Every morning a senior doctor came to examine the patients Scrupulous cleanliness was kept in the hospital One day an army surgeon, Dr Arima, and the Rev Mr Wada, of Tokyo, visited the hospital and spoke to us most kindly, wishing us a pleasant passage home and a joyful reunion with friends and relatives At the word home, many dropped tears One night we were treated to a magic lantern exhibition The different pictures showed the history of the Red Cross Society, and among the pictures were also those of their Majesties, the Emperor and Empress of Japan The wives of some Japanese officers visited the Red Cross Hospital The first party gave 3 yen to the patients to buy what they liked, the second party gave 7 yen Some handkerchiefs, tobacco and cakes were distributed to each of us in the hospital as souvenirs to take back home It is with an indescribable feeling of sadness and joy that I write this account It is sad to have been made a prisoner of war, but, having been captured, I am glad that it was my good fortune to have been thus kindly treated The total number of prisoners at Osaka, including officers and men, was very nearly three hundred, and all agreed that we were better treated than we had any reason to expect It is usually with reluctance that men speak well of their opponents, but facts like these ought not to be concealed We have a saying in China that kindness received should never be forgotten I have not written this account with the joy and enthusiasm of a sensational novelist, but simply to discharge what I feel to be clearly my duty"

Society Notes

The Tri County Medical Society, at its regular meeting held in Paxton, Ill, November 8, elected the following President, W P Pierce, Hoopestown, Vice-President, T N Bowe, Loda, Treasurer, J Y Campbell——The annual meeting of the Topeka Kan, Academy of Medicine and Surgery was held November 11 The following officers were elected President, M B Ward, Vice-President, W E McVey, Secretary and Treasurer, Ida C Barnes——The annual meeting of the Schuylkill County Medical Association was held in Pottsville, Pa, November 12 The following officers were elected President, A P Carr, St Clair, Vice-President, A F Bronson, Girardville, Secretary and Treasurer, George Little, Tamaqua

Hospital Notes

Frederick Holme Wiggin has been reappointed visiting gynecologist to the New York City Hospital by the Commissioners of Charities and Correction

Post-Graduate Hospital of New York—The Board of Estimate of New York city has made an appropriation of $60,000 in support of the gratuitous hospital and dispensary work done by the above named institution for the year 1896

Hospitals Remembered—Under the will of the late William Stackpole, of Brooklyn, N Y, reversionary interests are conveyed to certain charitable institutions Of these, the St Mary's Hospital and the St Mary's Female Hospital will receive each $1,000

Detroit Notes

Typhoid Fever—A communication dated October 16, has been received by the Health Board of the city of Detroit, from the State Board of Health, stating among other things, the fact, that owing to the prevalence of typhoid fever in Detroit, the disease has spread to other parts of Michigan, and as a result there have been ten outbreaks and three deaths It also requests the Detroit Board to enter vigorously upon the work of notification and restriction of the disease in Detroit On the strength of this communication, Dr Samuel P Duffield, health officer of the city has issued circulars to the nurses and persons in charge of typhoid patients, instructing them to disinfect all discharges as soon as possible, by pouring a quantity of the solution of chlorid of lime or copper sulphate into the bed-pan, and to have the mattresses and other bedding destroyed He also sent a circular to the undertakers, impressing upon them the necessity of carefully and thoroughly washing out the intestine, either with the solution of one half pound blue vitriol and one gallon of water, or two pounds zinc sulphate and one gallon of water, and not to place any reliance on the virtue of the embalming fluid to kill the typhoid germ

Detroit Medical and Library Association—At the last meeting of this Association, October 14, a very interesting paper entitled "Hay Fever, a successful Treatment based on a New Theory," was read by Dr F W Strangways, and discussed ably by Drs E L Shurly, P M Hickery and H J E Emerson

Wayne County Medical Society—At the regular meeting of this society November 14, a very interesting paper on smallpox was read by Dr John F Bennett, it was the more interesting from the fact of the existence of smallpox in Detroit at the present time A number of physicians from Windsor, Ontario, Delray, Highland Park and other surrounding places were present Dr J J Mooney also read a paper entitled "Angio-neurotic Edema"

Personal—Dr N W Webber is now convalescent from his late attack of rheumatism

Mortality Report for the week ending November 16 deaths, 78, under 5 years, 26 Births, male 53, female 35, total 88 Report for week ending November 16, (contagious diseases) diphtheria last report 43, new cases 22, recovered 34, died 6, now sick 25 Scarlet fever last report 11, new cases 6, recovered 4 died none, now sick 13 Smallpox last report 1, new cases 2, recovered none, died none, now sick 3

St. Louis Notes

The Weekly Mortuary Report, gives for the week ending November 16 deaths, 156, compared with 167 during the preceding week, and 165 for the corresponding week of 1894 Births reported, 294 The contagious diseases reported during the week ending November 16, were diphtheria, 126 cases, 10 deaths, croup, 16 cases, 7 deaths, typhoid, 10 cases, 2 deaths, measles, 15 cases, scarlatina, 8 cases

St Louis Medical Society—The program of the meeting of November 16 consisted of a paper on "Tuberculosis of the Knee-joint," by Dr Funkhouser, with prepared discussions by Drs H H Mudd and Pinckney French The general discussion was further maintained by Drs Hoffman, Fairbrother, and Hodgen

Charity Commissioners—At the regular meeting November 11, the supervision of the various city institutions was divided among the commissioners, and hereafter written monthly reports on each institution will be required In future, an effort will be made to prevent the prolonged detention of boys in jail in the contaminating atmosphere of the criminal classes

Provision for Idiots and Imbeciles—There has been some public agitation of late of the question of State provision for this dependent class Such improvements are to be accomplished only after assiduous efforts on the part of those who come in contact with such individuals, and the medical profession should lose no opportunity to show the need of this socially protective charity

Meat Inspection—At the request of the Health Commissioner, a bill has been presented to the Municipal Assembly repealing the present meat inspection ordinance and providing for the thorough inspection of live animals intended for food, also, for the inspection of meats of all kinds, poultry, game, etc, when ordered It provides for the same force of inspectors numerically as now employed, namely, four, one to be a chief inspector at a salary of $150 a month, and three assistants at salaries of $125 a month each Two of these must be practical butchers All must work under the supervision of the Board of Health and each must be secured by a bond of $4,000 for the faithful performance of his duties Accompanying this bill was a statement of the Health Commissioner who explained that he found that the laws respecting meat inspection were very inefficient, that this branch of the service cost the city $5,000 a year, with very meager results, that quantities of meat unfit for food, but the real condition of which was not revealed by inspection, were sold by the butchers, that no check was placed upon the slaughter of diseased animals, also that he had ordered the inspection of meats stopped and placed the inspectors at points where the greater number of animals, intended for food were killed

The St Louis Academy of Medical and Surgical Sciences is the title of a new medical society lately organized The officers are Dr G W Cale James Moores Ball, Arthur E Mink, Emory Lanphear Thomas G Summers, Wellington Adams and George H Thompson It is reported that the membership is to be limited to 50, and that an applicant for membership can gain admission only upon the merit of a thesis submitted

Damage Suit—Dr Carl Barck has successfully defended a suit brought against him for $10 000 damages, by a patient, for the loss of sight The case was clearly one where ignorance on the part of the patient had led to a disastrous result, and to a hope to make the Doctor pay for what he was in nowise responsible One of the patient's eyes had been injured to a degree requiring enucleation, this operation was refused in spite of warning for the safety of the uninjured eye Later, the patient returned for operation, and the doctor performed enucleation, stating at the time that there was great probability that the operation was then too late to save sight in the opposite eye The fulfillment of his prediction was the occasion of the suit

Philadelphia Notes

The Trustees of the University of Pennsylvania have conferred the title of Emeritus Professor of Comparative Anatomy upon Dr Harrison Allen, in acknowledgment of his services to the institution in the chair which he recently resigned bearing a similar title

The Official Statistics of attendance at the University of Pennsylvania show a slight increase over last year The medical department has 819 in all the classes this year Last year the number was 815 The dental department has 306 against 278 last year, hygiene 56 or 15 more than last year, and veterinary medicine has 16 less than last term The total attendance in all departments is 2,472 students The entering class at the Jefferson is small this year on account of the inauguration of the four years course, while the matriculants at the Medico Chirurgical have decidedly increased because the fourth year has not yet been made compulsory

The Cliff Dwellers—The Archæologic Museum of the University of Pennsylvania has been recently greatly enriched by the addition of the valuable Hazzard collection of remains of the cliff dwellers, a great portion of which was one of the most interesting features of the Chicago Exposition The collection was formally thrown open November 9 by an address made by Mr Frank Cushing, who has made a special study, while living among the Zunis, of the primitive races of this continent Prof E D Cope made a few comments upon the physical characteristics of the cliff dwellers, as illustrated by the perfectly preserved skeletons and mummies contained in the collection The skulls were artificially flattened at the back, like those of many other Indian tribes The teeth showed a high type of development, while the hyoid bones and tibias were of a lower type There is nothing in their remains to separate these primitive people from other American Indians all of whom probably originally were of Mongolian derivation The collection of American antiquities in Philadelphia is claimed to be the finest in the world A course of public lectures will be given during the winter by Mr Cushing and Profs D G Brinton and Cope, in the library building of the University of Pennsylvania

Death from Carbolic Acid Accidentally Administered—A child fifteen months of age, died last week, soon after the administration of a teaspoonful of medicine, and the mother's lips also were burned by kissing the child just after the medicine had been given At the inquest it was found that the medicine was a very strong solution of carbolic acid, although the prescription called for only one drop of carbolic acid in a two-ounce mixture of peppermint water and plain water The prescription was given at the dispensary of the Jefferson Medical College Hospital, and the evidence before the coroner appeared to fix the responsibility upon the hospital druggist who, the coroner intimated had made the mistake of omitting the peppermint and dispensing equal parts of carbolic acid and water It was a death from misadventure, but it brings up the question for serious consideration, whether or not the dispensing portion of the service at the out-patient departments of great city hospitals is always on a par with other branches in efficiency and reliability It is probable that the courts will have occasion to pass judgment upon the question of liability for negligence or mistake by the dispensary druggist, especially if the latter be found not to be properly qualified for the duties of prescription clerk

Physiologic Experimentation in the Coroner's Office—The coroner of Philadelphia recently rendered an opinion which claims a place in medical annals A child 5 years of age, was bitten by a dog, alleged to be rabid, and a few weeks later was brought to the Pennsylvania Hospital with symptoms believed to be characteristic of hydrophobia After a short illness of less than three days the case ended fatally and a diagnosis of hydrophobia was made Subsequently, the coronor made an investigation, not because of any suspicion of violence or criminality in connection with the death, but apparently simply on general principles By direction of the coroner, inoculation experiments were made, and as the rabbits survived and did not become rabid, the conclusion was adopted that the child did not have hydrophobia and at the public inquest the coroner accordingly revised the diagnosis of the physicians who had had charge of the case, and who had had an opportunity to study it clinically Here is an instance of the dogmatism of the laboratory, about which clinicians have been warned by Professor Lepine, and of which they are likely to experience more in the future

Philadelphia Home for Incurables—A children's building has been added to the Philadelphia Home for Incurables consisting of a main structure three stories high, having a two story wing on each side, costing $36,474 It is of red mottled brick, with red sandstone trimmings and slate roof, and is fireproof throughout The main structure contains a reading room, matron's room, reception room and hall and sewing room on the first floor, diet kitchen and four rooms for special sickness on the second floor, and the nurses' and servants' quarters on the floor above The west wing contains the dry rooms, dining rooms and school rooms, and in the east wing are the sleeping apartments, where each child may have a separate room

State Pharmaceutical Examining Board—Of the 172 persons examined in Philadelphia by the State Pharmaceutical Examining Board, but 27 succeeded in passing Of these 16 received qualified assistants' certificates and 11 received registered pharmacists' certificates In Pittsburg, 27 out of 108 applicants were passed The next examination will be held in Philadelphia on January 18

Washington Notes

Health of the District—The report of the Health Officer for the week ended November 9 is as follows there was an increase of 5 over the previous week in the total number of deaths reported at the Health Department last week While the mortality from the brain and heart diseases fell from 26 to 6, those from lung maladies increased from 20 to 37 Deaths from typhoid fever decreased from 17 in the preceding week to 8 in the past week There were but 3 deaths from malarial fevers The dangerous contagious and eruptive ailments continue in abeyance, there having been but 2 fatal cases of diphtheria in all There were 97 births reported and 56 marriages Of all the deaths 26 were in hospitals and but 2 from the coroner The whole number of deaths was 121, of which 70 were of white persons and 51 colored

Annual Report of Committee on Public Health—At the meeting of the Board of Trade held on the 11th inst, the annual report of the Committee on Public Health was read and adopted The following are the principal subjects of recommendation made with a view to remedying existing evils 1 The extension of the system of sewerage and the completion and purification of the water supply, including the abolition of pumps and wells and the establishment of a proper system of sedimentation and filtration 2 The enactment of an effective law regulating the sale and supply of milk 3 The establishment of a bacteriologic laboratory in connection with the health department 4 The revision and extension of the sanitary laws and regulations of the District, including the appointment of a committee of five to prepare and formulate a code thereof for presentation to Congress 5 The enactment of a law for compulsory vaccination and revaccination 6 The enactment of a law to regulate the practice of medicine in the District of Columbia The medical men on the Committee are Dr Samuel C Busey, Chairman, Drs G L Magruder and H L E Johnson

The Woman's Clinic —At the annual meeting of the contributors to the Woman's Clinic, held on the 5th inst, the Secretary reported that 3,165 patients had visited the clinic for treatment during the year The following board of directors was elected for the ensuing year Drs D S Lamb, Ida J Heiberger, Mrs Mary F Case Miss Minnie E Heiberger, Drs J H Bryan, S M Burnett, H L E Johnson, Mary Parsons, D W Prentiss, Julia E Smith, Abbe C Tyler, Mrs Cora Dufour, Mrs Marian H Anderson, Mrs Emily L Sherwood, Drs H C Yarrow Robert Reyburn, Mabel Cornish, Miss Satie Hyde, Mrs Walter E Burleigh, Drs Sofie A Nordhoff, Jessie Kappelar, Phebe R Norris, Ada R Thomas, Susan J Squires and Adeline E Portman Mrs Anderson was elected First Vice President, Dr Lamb, Second Vice President, Mrs Mary F Case, Secretary, and Miss Heiberger, Treasurer The clinical staff is as follows Drs Heiberger, Smith, Kappelar Cornish, Nordhoff, Dufour, Norris, Thomas, Portman and Squires

Annual Report of the Sanitary Officer of the District —The report of the sanitary officer shows that during the past year the whole number of persons furnished with transportation was 867, at an expenditure of $1,776 55 Attention is called to the increase of the number of persons sent to the hospitals of the District, the record for the year being 3,559, an increase of 183 over the previous year He renews his former recommendation looking to the establishment of an asylum or hospital for inebriates, where the treatment of such patients should be made compulsory

Microscopical Society Banquet —The twelfth anniversary of the Microscopical Society of Washington was appropriately celebrated on the 12th inst, by a banquet, which proved one of the most enjoyable affairs in the history of the organization The President of the Society, Dr Collins Marshall, presided, and Dr C T Caldwell officiated as toastmaker Toasts were responded to by Drs Marshall, William H Seaman, Robert Reyburn and J Melvin Lamb

Clinical Society Meeting —The Clinical Society of the District of Columbia held its regular monthly meeting Monday evening at Columbia Hospital There was a large attendance Papers were read by Dr Van Ezdorf on "Hydrothenudin," and Dr Louis P Smith on "Retroflexion of the Uterus" The papers were discussed by Drs Barton, Barrie, Lewis, Vale, Smith, Van Ezdorf, and others

Medical Society of the District —At the meeting of the Society held on the 13th inst, Dr Kober read a paper entitled "Impure Milk in Relation to Infantile Mortality" The paper was discussed by Dr Geo M Sternberg, Surgeon-General U S A, Drs de Schweinitz, Carr and others The Southern Surgical and Gynecological Society attended as guests

The Southern Surgical and Gynecological Society —The Southern Surgical and Gynecological Society held its eighth annual meeting during the present week Dr Samuel C Busey President of the Medical Society of the District, delivered an address of welcome on behalf of the local medical men The Washington Obstetrical and Gynecological Society entertained them at a banquet on the 12th inst, and Dr Joseph Taber Johnson gave a reception and banquet at his residence on the 13th inst, after the meeting of the medical society, to which they had been invited Through the courtesy of Mr John T Devine, proprietor of the Shoreham Hotel, the large banquet hall of the house was furnished gratuitously for the use of the society during their session The society has decided to hold its next meeting at Nashville, the second Tuesday in next November, and elected officers for the ensuing year as follows President, E S Lewis, New Orleans, Vice-Presidents, Joseph Taber Johnson, Washington, and Richard Douglas, Nashville, Secretary, W E B Davis, Birmingham, Ala, Treasurer, A M Cartledge, Louisville Council, Geo J Engleman Boston, Hunter McGuire, Richmond, W D Haggard, Nashville, Bedford Brown, Alexandria, and L S McMurtry, Louisville Committee on Arrangements, W D Haggard, Nashville Many new members were admitted to the Association, and a pleasant incident of the day was the receipt of a handsome gavel from Dr H Marion Sims of New York, in memory of his father The gavel has a very unique history or origin It was turned from one of the legs of an old operating table used for many years by J Marion Sims The next meeting will be held the second Tuesday in November, 1896

Dr Henry J Crasson's Marriage —On the 12th inst, at St Peter's Church, Dr Henry J Crasson was married to Miss Margaret Blaine, daughter of Mr and Mrs Robt G Blaine, and niece of the late Hon James G Blaine Dr Crasson was for some time one of the assistant physicians to the Central Dispensary and Emergency Hospital

Circular to Medical Examiners —The Equitable Life Assurance Society of the United States has sent the following circular to its medical examiners

Please take notice that on and after Nov 15, 1895, the following scale of fees for medical examinations will go into effect, in substitution for formerly established rates These will be uniform throughout the United States, the Canadian Provinces, and Newfoundland

Case of application for $8,000 insurance or under	$3 00
Case of application for over $8,000 but less than $25,000	5 00
Case of application for $25,000 or upward, short of $50,000	7 50
Case of application for $50,000 or upward	10 00

By order of the President,
Edward W Lambert, M D,
Medical Director

N B —Installment insurance is reckoned at its commuted value

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S Army, from November 9 1895 to November 15, 1895

Capt Eugene L Swift, Asst Surgeon leave of absence granted is extended one month, and he is authorized to go beyond sea

Major Louis W Crampton, Surgeon, is granted leave of absence for three months, to take effect on or about Dec 1 1895

APPOINTMENTS

Thomas Jellis Kirkpatrick, Jr, and John Hamilton Stone, appointed Asst Surgeons with the rank of First Lieut, to rank as such from Nov 6 1895, and ordered to report to the President of the Army Medical School for instruction

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending November 16, 1895

Surgeon T Owens, detached from Naval Station Port Royal, S C, and granted three months' leave

Surgeon J R Waggoner detached from the "Independence," and ordered to the Mare Island Cal Navy Yard

Surgeon George P Bradley, detached from the Mare Island, Cal, Navy Yard and ordered to the "Indiana"

P A Surgeon George Rothganger detached from naval hospital treatment, and ordered to the "Independence"

Surgeon J E Gardner, ordered to Port Royal, S C, Naval Station

Change of Address

Fletcher Wm W from Susquehanna to West Carbondale Pa

Gihon A L from Washington, D C, to United Service Club, 16 W 31st Street New York N Y

Goode, Thos F, from Buffalo Lithia Springs to Boydton Va

Massey G Betton from 212 S 15th Street to 1636 Walnut Street, Philadelphia Pa

Moffitt, F W, from 1269 93d Street, to 4257 Cottage Grove Avenue Chicago Ill

Scholer, L S, from 3 N Clark Street to 1956 N Halsted Street, Chicago Ill

Vincent, Dr, from La Porte Ind, to 811 12 "The Arcade" Cleveland Ohio

Westmoreland W F, from Austell to Atlanta, Ga

LETTERS RECEIVED

Adams D S Manchester, N H Andrews B J, Burlington, Vt, Allport F Minneapolis, Minn Ayres, H B Indianapolis, Ind Ammonol Chemical Co, New York, N Y Ayer N W & Son (2) Philadelphia, Pa Alta Pharmacal Co St Louis Mo

Bolt I O, Washington D C Babcock, L G Cumberland Wis Brown, Edward J Minneapolis, Minn Bryan, J H, Washington, D C

Cutter, John A New York N Y Collins C A, New York, N Y Chapman, F B Middleton, Mass

Delevan D B New York, N Y

Fraser, I C Chicago Ill Fletcher, Wm W, W Carbondale Pa

Globe Mfg Co Battle Creek Mich Goode Thos F, Boydton, Va Gahagan Dr H J, (2) Elgin Ill

Heath J W, Schaefferstown Pa Herrick, S J, Everest Kan, Hon, A W Harrodsburg Ind Hummel, A L Advertising Agency, New York N Y Horwitz Orville, Philadelphia, Pa

Irwin F, Washington, D C, Imperial Granum Co, New Haven, Conn

Kinnaman, A S Cleveland Ohio

Lehn & Fink New York N Y Longmans Green & Co, New York City Larkins E L, Terre Haute Ind, Lippincott, J B, Company Philadelphia Pa

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Newman, Dr Robert, New York City Newman, H P Chicago

Plummer The R N Co, New York, N Y Palladium The, Ann Arbor, Mich Publishers Collection Agency Chicago Ill, Paquin, The Paul Laboratories St Louis Mo, Parke, Davis & Co, Detroit, Mich, Polk, R L & Co Detroit, Mich

Ridlon John, Chicago, Ill Reichman, Max, Chicago, Ill

Schieffelin & Co, New York, N Y Stearns F & Co Detroit Mich Supervising Surgeon General Marine Hospital Service, Washington, D C Smoley, J G Connersville, Ind Schimmel, M S Baltimore Md Shlensky J (2) Washington D C Schering & Glatz New York, N Y

Tarrant & Co, New York N Y Tabb, W R & Co, New York City Tuttle & Clark, Detroit, Mich

Vincent, D Cleveland, Ohio

Willcox E S, Peoria, Ill, Woodruff, J O & Co, New York, N Y

Zumo Pharmacal Co, St Louis, Mo

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ORIGINAL ARTICLES

HYPNOTISM

ITS USES, ABUSES AND MEDICO-LEGAL RELATIONS

Read in the Section on Neurology and Medical Jurisprudence at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md May 7-10 1895

BY WILLIAM LEE HOWARD, M D
BALTIMORE, MD

It is with a grateful heart and thankful attitude that I address this Section on some of the aspects of hypnotism After several years of study of this subject in the medical centers of Europe, I found the opportunities here rather inconvenient for anything more than unassisted investigation Two years ago I found myself repeating the words Euripides put into the mouth of Medea

> "For when you bring new truths to men's minds
> They deem you not wise but unpractical,
> While those who on deep learning pride themselves
> Are piqued, and you incur the general hate"

It is not necessary to say more, for science has proved too strong for prejudice

I shall take up the subject by dividing it into four sections

1 Theories and facts
2 Its therapeutic uses
3 Its abuses
4 Its medico-legal relations

The theory of hypnotism I shall touch but little upon, for we have been studying the phenomena for several years, and it is now time to take action on our conclusion of facts as far as we have them As neurologists we have too long been studying the brain, not its functional product—the mind The abuses of hypnotism call for some attention, as they must be shown and predicated before we can take up the juridic side of the case

I do not intend to go into the discussion of the theories of the two schools of hypnotism, but I think we can, by looking at the subject from an elemental basis, get a better understanding of the foundation upon which these superstructural theories have been reared

Whether we take the Charcot or Nancy school, the subject is the same to us from a therapeutic or medico legal point of view Charcot's school agree in regarding hypnotism as an induced neurosis closely allied to hysteria, and therefore pathologic, while the Nancy school refuse to see in hypnotism anything but a psychologic condition almost identical in its nature to natural sleep

Charcot considered hypnosis a distinct entity marked by the presence of certain somatic phenomena while Bernheim denies that there are any technical phenomena characteristic of the condition, and refers everything to suggestion Although a former pupil of Charcot, my investigations have led me to follow the teachings of Bernheim

This idea of suggestion grasped in its full significance, compels us to alter somewhat our old idea of the *ego* In fact, it is questionable if our ordinary conception of it is correct We are accustomed to think of the ego or personality as something *in se ipso totus, teres atque rotundus*, a complete indivisible unity

Recent studies in psychology seem to indicate that the unity of the human consciousness is not one of its functional attributes

To quote Mr Myers[1] "My organism is the real basis of my personality I am still but a colony of cells, and the unconscious or unknowable, from which my thoughts or feelings draw their unity, is below my consciousness and not above it, it is my protoplasmic substructure, not my transcendental goal"

According to this, the self is not a separate entity independent of the organism in which it dwells, and its entity is really a product of its structure So that it is not only consciousness of self but the quality of the particular self that depends on the relations, partly structural, partly relations of adjustment—between the cell or other units which compose the organism Alter these relations and you alter the self These alterations are brought about by suggestion, and this produces the phenomena seen in the various stages of hypnotism

The general impression that hysterical persons are those chiefly amenable to hypnotism is an idea that I must dissent from I have hypnotized patients in Iceland, Africa, China and various other parts of the globe, and have not found that the hysterical element was necessary Furthermore, if only hysterical persons are susceptible we must modify and enlarge our conception of hysteria, or admit that 80 per cent of men and women, and 95 per cent of children are hysterical For nearly all children are hypnotizable, and we rarely find hysteria before puberty Dr Schrenk-Notzing has recently published some international statistics contributed by fifteen observers in nine different countries, and these give 6 per cent of failures in 8,705 cases Wetterstrand of Stockholm, states that the hardest subjects he found to hypnotize were hysterical and nervous persons, especially neurasthenics This has also been my experience Dr J J Bramwell of London,[2] states that he had succeeded in hypnotizing 88 per cent of both sexes, of varying ages and social positions The investigations of the Second International Congress of Experimental Psychology admitted the therapeutic advantage derived from hypnotic suggestion and the recognition of the important fact that the susceptibility to hypnotic control is not itself an indication of hysteria or of any morbid condition whatever in the subject

THE THERAPEUTIC USES OF HYPNOTISM

As regards the therapeutic uses of hypnotism we have been confronted by two divergent tendencies, the one leading to exaggeration the other leading men to disparage or ignore the subject It is scarcely necessary to state that this latter attitude is assumed through a lack of scientific inquiry into the matter These *quid nunes* display a feat of exegetic audacity which would equal that of a Chinese general. I shall try and look at both sides calmly, without undue enthusiasm or prejudice The few facts I shall offer for your consideration will be only those that have come under my observation the past year The literature of the past five years on this subject is so pregnant and rich in facts, and so ponderous in its multiplicity of works, that you are all more or less familiar with the therapeutic uses and limitations of hypnotism to day

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[1] Human Personality p 639
Lancet Nov 4 1893

For insomnia I know of no remedy equal to hypnotism Lately, considerable has been said about the use of hypnotism in dipsomania and alcoholism I have found it of great value in these cases, and have been able to cure 85 per cent of my patients When I say cure, I mean those who have gone three years without returning to their old habits I have had one relapse after three years complete abstinence, and one after three years and three months It is useless to try and cure your patients unless you are fully convinced that they honestly desire to be cured With the drug habit I have had about the same good result Bushnell, Surgeon U S A, gives a list of eighteen cases He says "I have never failed to hypnotize a patient who sought treatment for alcoholism

The reason we get such good results in alcoholism and the drug habit is on account of that intellectual inertia consequent upon frequent stimulation, and it is a psychologic fact that a mind thus weakened is more susceptible of receiving and accepting suggestion than one in possession of more stable and mental vigor This is only true where there has been no organic change in the brain tissues Of course this treatment should go hand in hand with the modern hygienic methods now used in institutions throughout the country

I will say here that I do not intend to give histories of cases, as my time is limited and I wish to over the whole ground in a general way

Hypnotism is of value in enuresis nocturna, masturbation in both sexes, acquired but not congenital sexual perversion This is a distinction to which I particularly wish to call your attention

In certain forms of hysteria which baffle all other methods of treatment, hypnotism is invaluable Pope,[4] reports a case of hysterical alexia cured by hynotism I have cured cases of hysterical contractures that had been the rounds of the hospitals Daland also reports similar results[5] Dr Eugene Reveielva[6] reports a case of hysterical paraplegia cured by suggestion I have had one case of paralysis agitans,[7] in which the movements were arrested during suggestive sleep, thereby giving the patient much needed rest Barretto Pisquer, Bahia, Brazil,[8] gives several cases of hysteria cured by hypnotism I think that we can lay down the rule that hypnotism will invariably remove hysterical symptoms if not hysteria itself While these facts may appear contradictory to my former statement that hysterical persons were the hardest subjects to hypnotize, you will remember that I did not say that they could not be hypnotized They require greater persistence on the part of the operator, and your efforts will often prove fruitless Mental excitement greatly militates against hypnosis[9] I have had many failures due to this condition

In cases of epilepsy, I think that too much importance has been attached to suggestion and not enough to artificially induced sleep Especially is this so in anemia and chlorosis Berillon reports a cure of four out of twenty epileptics, in six other cases the attacks were greatly modified In a young woman of 25 years, an aphasia of three years standing was completely cured I am far from believing that persons with inveterate hystero epileptic fits can be cured by anesthetizing hysterogenic zones or by stopping these sleeping periods by hypnotizing and suggesting at the same time But since the outbreak of inveterate fits is preceded by a period more favorable to our therapeutic operations, the experiment of leading the disease into other channels during these periods seems to me worthy of trial Wetterstrand is now keeping those patients in a prolonged sleep lasting several months I believe here we are on the right track You can suggest intervals of awakening and hunger I kept one patient who was having five fits a day free from them for ten days, during which she was in an artificially induced sleep I feel certain that I could have greatly benefited her if not cured her, had I been allowed to continue the sleep for several months But church, meddling friends, and superstitious family were too strong for me

Babanski,[10] relates a case of left, hemiplegia, with hemianesthesia dating from an attack of year before. The patient had a post hemiplegic lateral tremor simulating insular sclerosis, contracture of the left leg and arm, and exaggerated reflexes He suffered from dyspnea dependent on emphysema Hypnotic suggestion caused a rapid cessation of the tremor, relaxation of the contractures, return of the common and painful sensations to the left side, return of the power to stand and walk without a stick and with very little dragging of the limb

The amelioration of all the symptoms continued for two years, during which time the man was kept in the hospital and occasionally hypnotized He died at the expiration of two years The autopsy revealed foci of yellow softening in both hemispheres, upon the convexity of the left occipital, and in the right hemisphere immediately behind the posterior extremity of the optic thalamus Almost all the posterior portion of the external segment of the corpus striatum was destroyed, and its cavity filled with fluid The medulla, pons medulla, and cord were not implicated, nor was there any degeneration of the pyramidal tract

Bernheim in commenting on this case, suggests the possibility of suggestion having reestablished the conductivity of sensory impressions of other tracts in place of those destroyed, but Babanski considers tha hypnotic suggestion simply affected the hysterica element of the case The fact, however, remains tha a man suffering from a grave organic disease of th brain was very greatly benefited by suggestion an enabled to walk long distances and feed himself fo two years, after he had been unable to do so for mor

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[3] Med News, Phila, 1894, xlv p 837 848
[4] New Orleans Med and Sur Jour 1894, n s xxi, 814 816
[5] University Med Mag, April, 1893
[6] Jour Med de Paris, May, 1891
[7] Parkinson's disease
[8] Gaz Med da Bahia 1894 95 N 97 105

[9] F Jolly, Hypnotismus und Hysterie eine Eroiderung Munche Med Wochenschrift 1894, xli, 247
[10] Hypnotism et Hysteria p 41.

than a year Several cases have been reported from Europe in which the symptoms of locomotor ataxia have been greatly warped by suggestion

We are all familiar with the fact that local and complete anesthesia can be produced in hypnotic subjects, and minor as well as major operations done with greater facility and less danger than with chemic aids That hypnotism will ever take the place of our present anesthetics is very doubtful, as this stage of mental suggestion can not always be effected at the time wanted, however, I have used it frequently in cases where I had the time to thoroughly develop the subject, and often in an emergency I believe that we are doing an injustice in giving the anesthetics without first attempting to produce an anesthetic condition by hypnotic suggestion In dentistry, for the extraction of teeth, I have used it several times at the request of the dentists It is a safe, neat and very satisfactory method of painlessly extracting teeth But the *zeno genesis* can only be produced by one who has the confidence which comes from experience

Professor Hitzig[11] produced anesthesia in the whole forearm for painful scars, the effect of such suggestion done but once lasting several months Prodromal headaches in certain cases can be relieved by hypnotic suggestion In labor cases it is best to hypnotize your patient once or twice before labor begins I prefer to begin several days before the expected occurrence, because when labor begins the condition of suggestibility decreases on account of other sensations intervening A large number of observers, especially Schrenck-Notzing, report successful cases of confinement by hypnotic suggestion The advantages of hypnosis in labor are the removal of consciousness of pain, regulation of position of limbs, body and attitude, and increase or diminution of uterine contraction by action of voluntary muscles under suggestion

In persistent hiccough that sometimes baffles all other treatment, I advise you to try hypnotism In a case of four days' persistent hiccoughing I gave immediate relief Dr Fitzgerald, of the City Hospital, St Louis, had a similar result in a case of an old man who had been hiccoughing for forty eight hours and who was in a very low condition

In a large number of cases it is not necessary to produce complete hypnosis to get satisfactory therapeutic results If you have hypnotized the patient several times, if even he has only been in a state of lucid lethargy, he will often take suggestions satisfactorily in a waking state Deep sleep is not necessary for suggestions to take effect There are also persons so amenable to suggestion that hypnosis is unnecessary, this is especially the case with children In other persons, suggestions must be adapted to the condition of the patient, to his mental individuality, and to the special symptoms to be removed

I have been unable to see any decided beneficial effects in the hypnotization of the general insane In fact, it is almost an impossibility to endorm these cases Idiots particularly, are almost invariably incapable of being brought to that condition of mental attention which is necessary to produce a hypnotic state In those children who are morally perverted by environment and acquirement, mental suggestion is the proper treatment In fact, in these cases we have in hypnotism a basis for a mental and moral orthopedia The only authority who credits hypnotism as of value in the treatment of the insane is August Voisin, but as his statistics only show 10 per cent of cases benefited, it is scarcely worth placing much confidence in this therapeutic method Dr George M Robinson, of the Royal Edinburgh Insane Asylum, has used it with success in insomnia, as a sedative in excitement, as a substitute for restraint, and to dispel fleeting delusional states and the minor psychoses

Therapeutically, suggestion is of value in evolving isolated disturbances in the organ of mind, the cerebral cortex to be acted upon, apart from the symptoms of disease which may be associated with them

THE ABUSES AND DANGERS OF HYPNOTISM

The first danger that I wish to call your attention to, is one that directly interests ourselves That is, in receiving statements of hypnotic subjects we should constantly bear in mind the great risk of conscious and unconscious deception We must have some diagnostic data to rely upon to show the paralyses produced by hypnotic suggestion These facts must be known by the legal as well as the medical profession I give you these facts as laid down by P Richer and Gilles de la Tourette Complete laxity of limbs considerable exaggeration of the tendon reflexes, spinal trepidation, loss of muscular sense, exaggeration and modification of the muscular contraction provoked by the galvanic current, and vasomotor troubles I have generally found a fibrillary motion of the eyelids Jolly[12] gives three cases of mental derangement treated by hypnotism whose conditions were made temporarily worse by the treatment that is, they all showed symptoms of true hysteria which they had not before I have had one case that I feel certain was mentally injured by hypnotism, but it was the manner in which he was treated rather than the effects of hypnotism *per se* He was a subject that was like a piece of clay in my hands and a case that taught me many a valuable lesson I sent him to steal Dr Brinton's watch This he did most adroitly I brought him out of the hypnotic state, when he was accused by Dr Brinton of having his watch When the watch was found upon him the shock was so great that he immediately went into a cataleptic condition With great difficulty I brought him out of it These fits continued almost every hour for several days until I was enabled to hypnotize him and make the post hypnotic suggestion that he would forget all that had happened I have never hypnotized persons for experiment since, without giving them a post-hypnotic suggestion I claim that the injurious effects of hypnotism depend upon the nature of the suggestion, that we are enabled to benefit or injure the mind according to the cortical centers we inhibit or stimulate I will read you a letter I received a few days ago

NEW YORK, March 26, 1895

Dear Sir —About six weeks ago I was partially hypnotized by a person from whom I was taking lessons Since that time I have suffered from an oppressive feeling of weight on my brain, and such drowsiness and loss of interest in things about me that I am forced to think that this unusual condition was produced by the hypnotist especially as I first felt it immediately after the act Please let me know whether I am probably right in my opinion as to the cause of my suffering and give me the address of some reputable physician here, competent to diagnose my case and afford me relief

Yours, etc, ———

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[11] Brain 1893

[12] Arch für Psychiatrie xxv p 3

A Tuckey[13] mentions a case of complete cessation of respiration by hypnotic suggestion Recourse was had to artificial respiration Heidenhain[14] believes that a healthy person might be placed in jeopardy by continued suggestion to cease breathing I have frequently brought the respiration down to eight a minute, and run the heart beats up to 190 I only ceased the experiment for fear of disastrous results One could find no easier way of committing murder The cause of death could not be detected

We have one well authenticated death by hypnotic suggestion Ella von Salmon died under circumstances pointing strongly to hypnotism as the chief if not the sole lethal agency in her case[15]

The autopsy on this case was conducted in the Pathologic Institute at Buda Pesth in the presence of Dr Jozas and several other physicians The brain exhibited a high degree of anemia and consecutive malnutrition, with indications of edema, otherwise there was no abnormality Dr Jozas considers the cause of death, acute anemia of the brain, incident to the hypnotic state, with syncope and heart failure The experiment with her was of a startling and highly sensational nature While in the hallucinatory state she saw by suggestion a diseased lung, and gave a long description of the pathologic condition in an excited and agitated manner The final question of the operator had an intense emotional effect on her, and caused her collapse She did not die from auto- or imparted suggestion, causes which might prove fatal under certain circumstances In commenting on this case Kraft-Ebbing says "The question of the cause of death in this case probably permits this answer The unskillful use of hypnotism by a layman and the unusually violent cerebral excitement stand as the causes of death" This case teaches us that the laity should not practice hypnotism This naturally brings us to the consideration of the medico-legal aspects of hypnotism

THE MEDICO-LEGAL ASPECTS OF HYPNOTISM

We now come to the juridic aspect, and this opens such broad possibilities, such intricate problems, and in our present state of knowledge of the subject, such a bewildering maze of contradictions, opportunities, and incongruities that I approach the matter with hesitancy To even approach the threshold of this side of hypnotism with as few words as possible is no easy task However, I will attempt in five minutes to give you the kernel of my thoughts and study on the matter

I think that I can say without the fear of contradiction that we all agree that laws should be enacted in this country regulating the practice of hypnotism Such laws, and stringent ones too, exist to day in most civilized communities All public demonstrations of hypnotism should be suppressed by legal action, and the courts take cognizance of citizens being subjugated by any unqualified experimenter, as it does of the unlawful practice of drug prescribing or surgical operations by unqualified and unlegalized persons The trail of hysteria, auto-hypnotism and neurotic eruptions that is left in the towns visited by the traveling mesmerist can only be understood by one watching the route of these pseudo-scientific men This was well illustrated in the Briggs-Picken case at Eau Claire this winter Two young girls who had been subjects of a traveling hypnotizer were finally wrought up to such a condition of hysterical autohypnosis as to accuse Dr Picken of seduction under hypnotic control Judge Wm F Bailey very justly decided to get some information upon hypnotism before allowing the plea of hypnotism to be entered The case being laid before me, I soon satisfied myself that there was no basis upon which to enter such a plea I concluded that the simulation was objective That the case was one of auto suggestive self-deception The wanton and unscientific hypnotic suggestions which had been given them for several days produced in these girls a condition in which they gave statements of erotic auto suggestion, delusion of memory, delusion of sight, and gaps in their life's history

In the Anderson-McDonald case just decided by the Supreme Court of Kansas, wherein the hypnotized or automatic murderer was acquitted and the hypnotizer sentenced to death, we had the first case of the kind in this country, but you are all familiar with several cases of the kind decided by the courts in Europe One error seems universally prevalent among both the laymen and the profession who have criticised this decision Because the hypnotizer was not present when the act was committed, the opinion is expressed that the person committing the act was not hypnotized This is a grave error, and the court should be made familiar with the greatest danger hypnotism presents I refer to the post-hypnotic condition By post-hypnotic condition I refer to the appearance of a hallucination at a given day and hour or the performance of a suggested action after a certain interval of time during which interval the subject is in his normal mental condition This is the only scientific explanation of the idea of transference of suggestion through space There is no such phenomenon known to the accurate psychic observer. There must be verbal or ocular suggestion, as sending a note to the subject which commands him to perform certain specific acts In those cases of murder where hypnotism is proven, and the hypnotizer is absent when the act is committed, this post hypnotic condition must be seriously considered These post-hypnotic suggestions are given when the subject is in a state of complete hypnosis, but he will after an interval of time, during which he is in his normal state, carry out the suggestions which have been given him, totally unable to explain his reasons for so doing, and carrying them out in all gradients from credulity to extreme hallucinations, all depending upon the purport of the suggestion The recrudescence will occur several weeks after the suggestions have been given.

That crime can be committed through hypnotic suggestion, I am fully convinced I do not base my conviction on the results of the well known laboratory experiments but upon more practical and satisfactory evidence[16]

Under certain circumstances there is no reason why the court can not require an examination of the accused and witnesses by qualified hypnotists *Salus populi suprema est lex* Evidence thus obtained, however, should be used only as indicating where legally usable and valid evidence might be obtained, and not itself legally usable and valid Such cases should if possible be tried before a judge not a jury This is possible in the countries in Europe where the laws differ radically in some respects from those extant here

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[13] Brain, vol XII

[14] See Loos Otto Der Hypnotismus und die suggestion in gerichtlich Medicinische Beleuchtung

[15] See Lovrich, J Tod während der Hypnose Pest Med and Chir Presse Buda Pesth, 1894, XXX 1016 1018

[16] See N Y Med Jour, March 9, 1895

Hypnotism is a justifiable inquisitorial agent for finding clues In Indianapolis, last January, Frank Pierce and George Schoppe were both arrested and convicted on evidence given by young Schoppe while in a state of hypnotism Dr Gardener, of Napa California Insane Asylum, was called into court last November to hypnotize the murderer Livernash, and succeeded in getting the truth from him I might continue by quoting a large number of similar cases in Europe, but these are sufficient for my case

The law in Holland allows the subjection of the accused to the process of hypnotization to obtain evidence, but such evidence thus obtained can not be made use of unless otherwise corroborated [17]

In discussing the question from the standpoint of criminal law we are confronted by two great questions 1, the responsibility of the hypnotizer, 2, the responsibility of the hypnotized

To the first question the answer is very simple The hypnotizer occupies a position akin to that of an accessory before the fact, who, under the common law of England is equally guilty with, and is punished as a principal, but in the case of a crime committed by one under hypnotic suggestion, the guilt of the hypnotizer is increased In the case of principal and accessory, there are two wills acting in unison, but in the other, the will of the hypnotizer stands alone in the guilt, and if the crime was murder, his position is precisely that of one who lets loose a wild animal upon his victim, knowing that the nature of the animal is such that he will surely kill

From what I have said on the first question, it follows as a corollary to the proposition that the second question is answered by saying that the responsibility of the hypnotized is no greater than that of one who is *non compos mentis*, but this broad generalization requires to be somewhat qualified, and in this connection I desire to note a dissent from Albert Hall in his sweeping condemnation of the view of Desjardins, "that a person who commits a crime by post-hypnotic suggestion is punishable, because he might have foreseen the possibility of such suggestion "

This language is, from a legal standpoint, objectionable, in that it is vague and liable to misconstruction, but with certain qualifications it can, I think, be fairly indorsed If the party hypnotized knew previously that the hypnotizer had this power and was a man of criminal habits and inclinations, and that he himself was subject to hypnotic influence, and yet, while in full possession of his will, he placed himself in such a position as to be within the scope of hypnotic influence, I am strongly of opinion that a certain degree of legal responsibility attaches to him for any crime he may commit, either under the influence of hypnotic or post-hypnotic suggestion, though to what extent he should be punished I am not prepared to say, but his position might be fairly held somewhat analogous to that of an engineer by whose carelessness a passenger was killed—the absence of criminal intent being the same in either case If the one hypnotized had caused the criminal act to be suggested to him, the guilt of both parties would be equal

Now, having fixed the status of the hypnotizer and hypnotized before the criminal law as to their respective resposibilities, we come to what I regard as the most difficult problem to solve how is it to be demonstrated that a given crime was committed by a prisoner while in a state of hypnosis? Such claims are now frequently being brought before our courts. Such a defense may rightly be interposed, and while evidence might properly be introduced in a homicidal case to show that the prisoner had no motive to kill the deceased, but that A had such a motive, and that A possessed the hypnotic power, and that the prisoner was subject to hypnotic influence, and while such evidence might raise in the minds of the jury such reasonable doubt that they would be forced to acquit the prisoner, yet, when the picture is reversed, and we see A placed at the bar, the prosecution is beset with such difficulties under the rules of evidence that I do not consider that it would be competent for it to prove the responsibility of A, by showing that he had exercised the hypnotic power over B at other times, any more than it would be competent for it to prove the guilt of a prisoner by showing that he had been guilty of similar offenses at other times, which evidence is always inadmissable except in rebuttal, where the defense has offered in chief evidence tending to show the previous good character of the accused, and while such evidence would undoubtedly tend to carry moral conviction, it would nevertheless be legally inadmissable The law deals, particularly in its criminal jurisdiction, with facts, not probabilities, and the evidence must be confined to showing that in committing the crime the one striking the fatal blow was acting under either hypnotic or post-hypnotic suggestion, and that the prisoner was the actual hypnotizer, and, ergo, responsible

Another point which occurs to me is the difficulty which might well arise from the trouble in getting the person hypnotized to testify in the presence of the prisoner Might he not, by the exercise of his power over the witness, prevent him from testifying, or render his testimony worthless? Yet it would not be possible to remove the prisoner and then examine the witness, for by the inexorable rule of the common law, every man is entitled to be confronted by the witnesses against him, and no trial can go on in the absence of the prisoner, so that if the prisoner escapes during the trial of the cause, the trial must stop—the common law knowing nothing of any such proceeding as a trial in contumation

It is evident that some radical changes must be made in our criminal procedure in cases where hypnotism is alleged I think a point has been reached where scientific investigation, traveling on well-defined and incised lines, has brought out facts that now allow some regulation of hypnotism by a change of laws The future of the subject should now be confined to those whose training and predilections best fit them to continue research, and properly instruct physician and student Such prerequisites are absolutely necessary to place the phenomena on a dignified platform with nerve physiology Medical schools should be able to furnish instruction to their students in this rapidly developing branch of medicine, for, as Kraft-Ebbing says "Hypnotism as a biologic phenomenon of nature offers symptoms emphatically true, clear and objective, the proof of which is decisive "

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[17] Crocq fils L hypnotism et le crime Conferences au jeune barreau de Bruxelles, 1894 H Lermertin

DUPLEX PERSONALITY—ITS RELATION TO HYPNOTISM AND TO LUCIDITY

Read in the Section on Neurology and Medical Jurisprudence, at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md May 7-10 1895

BY R OSGOOD MASON, A M , M D

NEW YORK

After a hundred years of obloquy, hypnotism, with some of its most important phenomena, stands to-day an accepted fact Telepathy may be looked upon with suspicion, clairvoyance may be suffering in reputation from contact with charlatanry, but the simple hypnotic state with its conditions of lethargy, catalepsy and somnambulism, has passed from the region of doubt and hypothesis to that of a fact in mental science It is comparatively a newcomer in the scientific world As a wanderer—an Ishmaelite of unrecognized pedigree and doubtful reputation, it has long been heard of, but no one felt bound, and few felt inclined to make its acquaintance, but now with godfathers and sponsors of the highest respectability in the scientific world, it stands upon its rights and demands place and consideration It is no pigmy nor weakling, this newcomer, it has thriven and grown lusty on thorns and stripes, and now it stands sturdily and unabashed in the presence of the representatives of wisdom and with dignity sets forth its claims

And first, with slight respect for its modern sponsors, it claims for itself an honorable lineage, so ancient that its record is found in the very earliest literature and upon the earliest monuments It counseled kings, instructed the wise, swayed the fortunes of armies, enterprises and empires thousands of years before modern science was born Its origin and offices were then reckoned as divine, and its characteristic condition was named the "Sacred Sleep," in which the gods communed with mortals

Admitted as a legitimate member, to the brotherhood of science, its claims to consideration are both practical and philosophical As a therapeutic agent, as a hypnotic and anesthetic, as a stimulant to weakened or diseased organs or functions, as a reclaimer and deterrent from inebriety and crime, as a corrector of the wayward, a spur and educator to the feeble intellect and a dispeller of clouds from the obscured and wandering mind, no other single agent at our command can be compared with it On the other hand, from the higher or philosophical aspect, it is the key to many mysterious, and, by the old psychology, inexplicable conditions or functions of the mind Chief among these unusual states are *double* or *multiplex personality* and *lucidity* or *clairvoyance*, and it is to these conditions that I would especially invite your attention

Not until within the past decade has the subject of duplex or multiplex personality been intelligently examined Indeed, the idea even, of such a condition in any definite form is of very recent date The philosopher Reid, a hundred years ago, wrote as follows "My thoughts and actions and feelings change every moment, they have no continued but a successive existence, but that self, or I, to which they belong, is permanent The identity of a person is perfect, it admits of no degrees and is not divisible into parts," and while this statement may still express the general consensus of mankind upon the subject, and may in a certain sense be well founded, still certain facts have been observed since that philosopher wrote, which bear strongly upon the subject and are entirely rebellious and refractory to the law which he has enunciated

The case of Félida X , reported by Dr Azam of Bordeaux, is one of the earliest to attract the serious attention of students It is classic upon the subject, and may be briefly stated as follows As a child she was sickly, moody and hysterical At the age of 14 years, after a prolonged attack of an epileptiform character, she emerged into a new and entirely unusual condition Her general appearance was changed, and she talked and acted in a manner quite different from her usual self These attacks were repeated and became frequent, and the condition lasted for hours and even days together In her usual state she had no recollection and no knowledge of her second condition or what occurred in it, and the whole time spent in that condition was to her a blank On the other hand, all the different occasions when she had been in this second condition were linked together, constituting a distinct chain of memories, and a personality just as consciously distinct and conspicuous as her original self

The two personalities were entirely different in character and disposition, the original one being sickly, indolent and melancholy, while the new one was in good health, cheerful and industrious, perfectly sane and in harmony with her environments

The second self at length came to occupy the greater portion of the time and to consider herself the chief personality She married, brought up children and carried on the little business of a shop, all in an efficient and exemplary manner She knew the original self, but at first not as in any way connected with herself, but simply as another person and indeed one whom she disliked and dreaded Later she became acquainted with the peculiar relations which existed, and letters passed between the two personalities relating to their common interests, just as they might pass between two separate individuals This condition existed many years, and so far as I know still exists

A second case is that of the Rev Ansel Bourne of Rhode Island, an evangelist and farmer He left his home in Rhode Island Jan 17, 1887, and after transacting some business in Providence he went to Boston, then to New York, then to Philadelphia and finally to Norristown, Pennsylvania, where he opened a store for the sale of confectionery, stationery and other small articles

In this business he was known as A J Brown He lived in a room at the back of the store, cooking, eating and sleeping there He went back and forth to Philadelphia for goods to keep up his stock, and conducted his business as if he were accustomed to it On Sunday, March 13, he went to church and at night went to bed as usual On Monday, about 5 o'clock in the morning, he awoke and found himself in what seemed to him to be an entirely new and strange place He could not imagine how he came to be there, but thought he must have broken into the place in his sleep He waited impatiently for two hours, all the time fearing arrest, and then began to explore his surroundings He went out into the hall and seeing a door he knocked and was answered by his landlord who accosted him familiarly with, 'Good morning, Mr Brown" "Where am I?" he replied, 'My name is not Brown" He declared that he knew nothing of Norristown nor of the stationery business, that he was in Providence on January 17, which he supposed was the day previous, and saw the Adams Express wagons on Dorrance Street, and since that time he had no idea what had transpired The landlord thought he had suddenly become insane and he called a physician To the physician he said his name was Ansel Bourne and that he lived in Rhode Island, that the people in whose house he found himself declared that he had been living with them six weeks, for his part, he had never seen one of them until this morning

His friends were notified, they came on and settled his affairs, and A J Brown went back to Rhode Island and resumed his occupation there as Ansel Bourne, but of A J Brown, of his journey to Norristown, and of the business which he carried on there, he had not the slightest knowledge

Dr Richard Hodgson, Secretary of the Society for Psychical Research, and Professor James of Harvard College, now became interested in the case, they went to see Ansel Bourne and learned the particulars of his strange experience, but of the journey from Providence to Norristown no information whatever could be obtained At length Ansel Bourne was put into the hypnotic condition, when he was again A J Brown He then remembered all about his business at Norristown, and described minutely the journey from Providence to Boston, New York Philadelphia and then to Norristown giving the names of the hotels at which he stopped and the people whom he met—all of which was subsequently carefully verified He thought he had met Ansel Bourne, but had never known him intimately, and when introduced to the wife of Ansel Bourne while he thought possibly he might have met her, he very strongly repudiated the idea that sue was or ever had been *his* wife On being awakened from the hypnotic sleep he was again Ansel Bourne with all his usual feelings, opinions and affections, but had not the slightest knowledge of A J Brown, nor of the business he carried on at Norristown and certainly of any good or evil deed which A J Brown might have done, he, Ansel Bourne was absolutely ignorant and not in any manner to be held responsible

I have myself reported two cases of double or multiplex personality One is that of Alma Z in the *Journal of Nervous and Mental Disease* for September, 1893, the other that of M M, read before the New York Academy of Medicine Oct 12, 1888, and published in the *Journal of the London Society for Psychical Research* for December, 1894 An outline of the former case is as follows

Alma Z was an unusually healthy and intellectual girl, a strong and attractive character a leading spirit in whatever she undertook whether in study sport or society From overwork in school, and overtaxed strength in a case of sickness at home, her health was completely broken down and after two years of great suffering suddenly a second personality appeared In a peculiar child-like and Indian like dialect she announced herself as 'Twoey" and that she had come to help "Number One" in her suffering The condition of 'Number One" was at this time most deplorable, there was great pain, extreme debility, frequent attacks of syncope, insomnia, and a mercurial stomatitis which had been kept up for months by way of medical treatment and which rendered it nearly impossible to take nourishment in any form Twoey" was vivacious and cheerful, full of quaint and witty talk, never lost consciousness and could take abundant nourishment which she declared she *must* do for the sake of 'Number One" Her talk was most quaint and fascinating, but without a trace of the acquired knowledge of the primary personality She gave frequent evidence of supranormal intelligence regarding events transpiring in the neighborhood It was at this time that the case came under my observation and has remained so for the past ten years Four years later under depressing circumstances, a third personality made its appearance and announced itself as 'The Boy" This personality was entirely distinct and different from either of the others It remained the chief alternating personality for four years, when 'Twoey" again returned

All these personalities, though absolutely different and characteristic were delightful each in its own way, and "Twoey" especially was and still is, the delight of the friends who are permitted to know her, whenever she makes her appearance and this is always at times of unusual fatigue mental excitement or prostration, then she comes and remains days at a time The original self retains her superiority when she is present and the others are always perfectly devoted to her interest and comfort "Number One" has no personal knowledge of either of the other personalities but she knows them well, and especially 'Twoey" from the report of others and from characteristic letters which are often received from her and Number One" greatly enjoys the spicy witty and often useful messages which come to her through these letters and the report of friends

Here are three cases in which a second personality—perfectly sane, thoroughly practical and perfectly in touch and harmony with its surroundings, came to the surface, so to speak, and assumed absolute control of the physical organization for long periods of time together During the stay of the second personality the primary or original self was entirely blotted out, and the time so occupied was a blank In neither of the cases described had the primary self any knowledge of the second personality, except from the report of others or letters from the second self, left where they could be found on the return of the primary self to consciousness The second personality on the other hand, in each case, knew of the primary self, but only as another person—never as forming a part of, or in any way belonging to their own personalities In the case of both Félida X and Alma Z, there was always immediate and marked improvement in the physical condition when the second personality made its appearance Several other well authenticated cases are on record showing the same or a corresponding series of phenomena

These phenomena are altogether too marked and uniform not to have a *meaning*, and not to be influenced by some common law or bond, they are no psychologic comets wandering off into space, or in orbits which it is impossible to determine, they must belong to some system, governed by laws which it is possible to study and determine, and it is important to examine closely the psychologic firmament and study the phenomena there discoverable in order to gain what light and aid we may in determining the law by which they are all governed The first series of phenomena presenting analogies with those we have already examined is that connected with somnambulism, and here the analogies are most striking As in the cases above described so in ordinary somnambulism, first, the primary consciousness is blotted out—in sleep, second, another consciousness or personality takes control of the physical organization Third, the different occasions upon which the somnambulist walks or performs his physical or mental work are linked together in one common chain of memories—that which he thinks and does to night is generally a continuation of the thoughts, scenes and events of last night or the last attack of somnambulism—altogether constituting the action of a personality just as consciously distinct as the personalities already described, only of short duration Evidently here is another planet of the same system, revolving in a similar orbit and governed by the same central influence

Looking again, we come upon the interesting and now well known case of Madame B, observed by M. Pierre Janet, of Havre, and Dr Gibert, also a leading physician of the same city, and reported in the *Revue Philosophique* for March, 1888 It presents a remarkable instance of distinct personalities brought into action by means of hypnotism A brief resumé seems necessary

In her ordinary state Madame B is a stolid ignorant, but substantial and honest French peasant woman about 45 years of age—very modest and retiring and without the slightest desire for notoriety In this ordinary state M Janet calls her Léonie Hypnotized Léonie is at once changed into a youthful, vivacious mischief-loving and rather noisy personality who considers herself on familiar terms with the doctors banters and jokes with them and whom M Janet names Léontine Later and by further hypnotization and a deeper trance there appears a sedate personality—intellectually much superior to Léonie and much more dignified and sensible than the vivacious Léontine—and this third personality M Janet calls Léonore

Madame B the original or primary self, knows nothing whatever of either Léontine or Léonore and the time they occupy is to her a blank Léontine, however, knows Léonie the original Madame B, very well and is anxious not to be confounded with her She always calls her ' the other one" and laughs at her stupidity She says ' That good woman is not I She is too stupid" Léonore, the third personality, knows both Léonie and Léontine, and is equally anxious not to be mistaken for either of them Speaking to

M Janet of Léontine, she says "You see well enough that I am not that prattler, that madcap, we do not resemble each other in the least"

Madame B is married, but Léontine is not, but at her accouchement Madame B was hypnotized, and so Léontine was present, consequently Léontine has two children of whom she is very fond, and she would be very much hurt if her right of motherhood were questioned

It is evident that we have here still another planet in our system, moving in a similar orbit and guided by the same central influence as those already examined What is this central idea which dominates the phenomena that we have been considering?

We find a certain definite series of phenomena presenting themselves under three distinct conditions

1 A change from the ordinary or primary condition to a second and entirely different condition, brought about by illness or other physical causes

2 The same change of condition occurring in ordinary sleep and known as sleep walking or somnambulism

3 The same changes brought about experimentally by means of hypnotism—as in the case of Madame B and also that of Ansel Bourne

Of each of these three conditions, under which this change occurs, I have had well marked examples under my own observation, and I have carefully examined the literature of other reported cases, and they all present the same essential characteristics The cases are now too numerous and the phenomena exhibited are too distinct and in too perfect agreement to allow of reasonable doubt regarding the facts themselves, or of their *identity* under all these different circumstances The phenomena which are present in each case are such as to indicate the appearance of an entirely new and independent personality The thoughts, actions, feelings, opinions and even the facial expression and essential character of the second personality are utterly different from those of the primary self Such a marked change occurred in the case of Félida X, of Ansel Bourne, and Alma Z, it also occurs in many cases of somnambulism and also when the change is brought about by hypnotism The statement of all these second personalities themselves so far as it goes, corroborates the same inference The primary personality knows nothing of the second or succeeding ones The second personality in every case declares its absolute independence, is anxious not to be confounded with the primary self, and gives good and substantial reasons for that desire

Again, the submerged second personality sometimes shows its power to act independently, while the primary self is also in full and conscious activity This power was shown in the case of Alma Z and also in M Janet's subject, Madame B

Such are the facts What is the theory which best coordinates them?

I am fully aware of the infinite scorn with which the school of physiologic psychologists look upon experimental psychology, and upon any theory in psychology which is not based in physiology, but when Carpenter, the apostle of that school, could offer no better theory to explain a coherent message automatically spoken or written, than "unconscious cerebration" and "unconscious muscular action," and when Wundt, its latest expositor, teaches that the usual cause of dreams is indigestion, that sleep-walking like dreaming "has no mystery about it," that "the popular belief in premonitions by dreams we need not stop to consider," and that "such superstitions as telepathy and clairvoyance are not even open questions," we know that we are seeking explanations from men who accept or reject facts according to the influence they may have upon their own theories, and that they are useless as guides in this region because they have never themselves traversed it

A theory is only a view taken by the mind in its efforts at an explanation, and it is valuable only as it coordinates and brings into a harmonious system the facts under consideration It is evident that no theory of "unconscious cerebration" can cover the facts in the case of Ansel Bourne, where a perfectly conscious personality, unknown to Ansel Bourne, for six weeks carried on a business with which he, Ansel Bourne, was totally unacquainted, and carried it on in a perfectly sane, consistent and business like manner The facts will not come into line nor harmony under any such theory The theory of an entirely foreign personality carries us far afield and we do not find any necessity for accepting it, even allowing it to be sufficient Of the two theories we must choose the one most reasonable and in best accord with already known facts

The theory of a subliminal self or double personality covers and includes not only all the facts which we have examined, but many others equally inexplicable by the old psychology

Accepting then, provisionally at least, the theory of a subliminal self, without discussing the various questions which might arise regarding its origin, constitution, and its degree of independence of the primary personality—matters which alone would require a volume, let us glance for a moment at other ways in which it is manifested and consider any new or enlarged faculties which it may possess

Somnambulism has already been referred to as a condition in which the subliminal self is the ruling personality and in which the body acts under the control of the subliminal intelligence, but the subliminal self is also often present in sleep when the body is passive, and in that condition we have *dreams*

This is not the time nor place to discuss the general subject of dreams, intensely interesting as that subject is, but we are seeking further conditions and instances in which there is evidently mental action which is shut off from the primary intelligence and corresponds to the conditions already examined Such a condition is, sometimes at least, presented in ordinary sleep and the dreams which accompany it Allow me to describe a case under my own observation

L M, 35 years old, unmarried, has been my patient for the past fifteen years and has been a somnambulist from childhood She is also psychometric, possessing the faculty of perceiving the character and surroundings of those with whom she comes in contact, also when entering a room where persons are sick, she is strongly impressed regarding the result of the sickness These impressions do not come at her desire, but absolutely independent of it, and often in direct opposition to it, sometimes they are extremely vivid, amounting to visual perceptions, and then they seldom fail of being correct She has always considered this faculty a great nuisance, and whenever she has made known these impressions she has been ridiculed by her family Her dreams are equally vivid, true and sometimes prophetic The more vivid ones she does not call dreams, but says "When I *dream*, I *dream*, and when I *see*, I *see*" The following is one of her vivid dreams

She had a friend in one of the principal towns of the Rocky Mountains—a region which she had never visited, and of this man's surroundings she knew absolutely nothing

> One night she dreamed of, or as she expresses it *saw* this man in a room in the town where she knew he was living With him was another person of very marked appearance whom she minutely described She also described the room, its furniture, the bed, the matting upon the floor, the situation of the two people and the conversation He was saying to his companion 'I am going to New York for the purpose of influencing capitalists to invest in my scheme of irrigation" His companion ridiculed the idea He persisted in the declaration of his plan and intentions
>
> Three weeks later, early one morning, she dreamed she saw this man coming up the street in New York leading to her house, and saw her father go forward to meet him She immediately awoke with the impression strongly upon her, went to the window, threw open the blinds and there was this man coming up the street, having just left the train from the West and her father was going forward to meet him He came into the house She related to him her vision, to the most minute particulars of time and circumstances—some of which were not agreeable for him to hear He was thunderstruck—declared she must have been present, as no one not actually present could have given the particulars which she described—and he advised her, as she expressed it, to "go into the business"

This person has been known to me for more than fifteen years Her whole life has been one of industry, absolute truth and self sacrifice She is efficient and practical to a remarkable degree, and absolutely free from romance or flightiness

Wundt declares that cases where somnambulists are alleged to have done mental work in their sleep beyond their powers when awake is simply a fiction, and that no such cases have been reported by "competent observers" This woman was a costumer, and has been employed by several leading firms in New York in that capacity She affirms that on several occasions, when planning a costume, she has been utterly unable to carry out her idea in detail and has been obliged reluctantly to abandon it, when at night, in sleep, she has seen the whole idea perfected in every detail, and so vividly that she was able to carry it out with perfect accuracy the following day

Instances are numerous where the dream was of some particular event which was really transpiring at the very time of the occurrence of the dream Those most marked and interesting occur during times of excitement and danger, and the dreamers are quite likely to be children, or those to whom the events dreamed of were unfamiliar

Many such cases have occurred in England during her wars with India The following have been thoroughly examined by the Society for Psychical Research The first occurred during the siege of Lucknow

> A girl 13 years old had a brother in the East India Company's service in a regiment of infantry One night she dreamed that she saw her brother riding with other officers at the head of a *mounted* regiment It was not in battle but on a march She saw her brother suddenly fall from his horse, shot down and mortally wounded She described the place, the buildings in sight and the people around him It was all written down at the time by her aunt who had the care of her Five years later the officer who was at his side when he fell, visited the family and, at the request of the aunt, related all the circumstances connected with the brother's death, which corresponded in every particular with the record of the dream
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> A lady whose husband was engaged at the siege of Moultan, one morning in a condition of reverie between sleeping and waking, saw him fall desperately wounded, she saw the circumstances connected with removing him from the field, which were peculiar on account of delay, and saw him take a ring from his finger and give it to a brother officer, saying ' Take this ring and give it to my wife" The whole scene was in reality being enacted exactly as she saw it, and at that very moment, 200 miles away
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> Another child 8 or 9 years of age, not asleep but playing with other children in the grounds of the officers' quarters in England, saw her father, who was in India, lying under a tree, bleeding and dying from a wound in his head She described his position, appearance and the location of the wound—was fearfully agitated, and wondered that the other children did not see it Her father was actually at that moment dying in India and under exactly the circumstances which she described

I give these examples of the action of the subliminal self in ordinary sleep, in reverie, and in sudden vision while in the waking state The almost indefinite multiplication of parallel cases which have been abundantly verified would be easy, did time permit They all fall into line with the cases already presented, with the addition of certain perceptive faculties or powers exhibited by the second personality, not possessed by the primary one A hasty survey of these added powers of perception is necessary to our subject

Clairvoyance is still looked upon with suspicion by those who are anxious to maintain a reputation for scientific orthodoxy, and it is so looked upon because there is no method recognized by science for accounting for it The only vision known to science is that obtained by means of the physical eye, all other alleged visual perceptions are set down as illusions and figments of the imagination, and when they correspond to actual events they are explained by pronouncing them "coincidences" Taken as a phenomenon, apart from any theory as to its production, no fact is better established in the minds of those who have had opportunities to observe, than the fact of clairvoyance Those who have never witnessed it have a right to doubt, but the testimony of those who *have*, should be respected It is at least bad taste—it is worse—it is bad *method* to impugn either the honesty or capacity of those who have witnessed a fact, especially when the observers are educated and trained in proper methods of observation

The argument for clairvoyance is threefold There is 1, the anthropologic argument which points out the singular fact that alleged instances of it occur and have occurred among every people of which we have any knowledge, no matter how different in degree of development, environments, climate, comfort, nor how widely separated in locality 2, there is the historical argument which shows that in the literature of every nation which has a literature, from the dawn of letters to the present time, accounts of clairvoyance are found 3 there is the argument from personal evidence, educated clear headed men who have had special opportunities to observe this fact, and whose testimony on any ordinary subject would be received, declare that they have seen instances of it, and hundreds of cases on that sort of evidence are on record Important and full of interest as they are, the anthropologic and historical arguments must be omitted in this hasty examination and only those from personal evidence will be briefly presented

The *Société de Psychologie Physiologique* was organized in Paris in 1885, and was for several years presided over by Charcot Its bulletins were published in the *Revue Philosophique* Dr Dufay, of Blois, during this time presented to this society two separate reports on clairvoyance, which had come under his own observation—one related to his experience with Marie a servant and hypnotic subject of Dr Girault another prominent physician of the same city In one instance when hypnotized, she suddenly stopped in some sprightly conversation in which she was engaged burst into tears and became so weak that she had to be supported, and when asked what troubled her she replied that she saw the son of a near neighbor, and a friend of hers, then serving in the Crimea, and that he was dead—that he had just drawn his last breath When news arrived, it was that this young man had died exactly at the time Marie had seen him On another occasion she read the contents of a letter which Dr Dufay had just received from a military friend in Algiers, and had not yet opened Then at the earnest request of her hypnotizer she went, in her second personality to Algiers, described the correspondent, said he was ill, described his disease and described his surroundings all of which on opening the letter were found to be perfectly correct

Dr Alfred Backman of Kalwar, Sweden, has been fortunate in finding several clairvoyants among his patients Results obtained with two of these are given in the proceedings of the Society for Psychical Research While in the hypnotic state, either one could go far away, wherever directed, and describe scenes and events of which she could have no knowledge—some of which were known to the hypnotizer and some were an entire surprise to him—all of which, however, proved to be perfectly correct

Richet has given many interesting experiments conducted by himself, and Mrs Sidgwick of the Society for Psychical Research, has published a large collection of carefully sifted and verified cases

I have, myself, during the past year found a very excellent subject whom I will call A, whom I first hypnotized on account of illness, but who afterward proved to have psychic perception and clairvoyant powers of a remarkable character Once while in the hypnotic condition, I asked her if she could go away and see what was transpiring in other places, as for instance at her own home She replied that she would try I then told her to go to her home—in a small town 300 miles away and quite unknown to me—and see who was in the house and what they were doing After a minute of perfect silence she said "I am there' "Go in," I said, "and tell me what you find" She said "There is no one at home but my mother She is sitting in the dining room by a window, there is a screen in the window which was not there when I left home My mother is sewing" "What sort of sewing is it?" I asked "It is a waist for D," (her little brother) I wrote down every detail of her description, and then awoke her She had no recollection of anything which had transpired I then showed her the notes I had made of her visit to her home, and desired her to write at once to her mother and ask who was in the house at 4 o clock this same afternoon, where she was, and what she was doing The answer came, describing everything exactly as set down in my notes

On another occasion when I made my visit, it happened to be the day of the races occurring at a well known track some ten miles away, and members of the household where she was residing had gone to witness them Neither she nor I had ever attended these races—we knew nothing of the appearance of the place, of the events that were expected nor even of the ordinary routine of the sport She was put into the deep hypnotic sleep, and thinking it a good opportunity to test her clairvoyance, I requested her to go to the grounds and I carefully directed her on her journey Once within the inclosure she described the bright and cheerful appearance—the pavilion, the judge's stand and the position of persons whom she knew She said there was no race at the time, but that boys were going around among the spectators and getting money, that the people seemed excited, that they stood up and held out money, and beckoned to the boys to come—but she did not know what it meant I suggested that perhaps they were betting. She seemed to look carefully and then said "That is just what they are doing" She then described the race which followed, was much excited, and told who of the persons she knew were winners I then said "You will remember all this and be able to tell M, when she comes home"

It was found that everything had transpired as she had described One of the races had for some cause been a failure, all bets were cancelled and new bets were made, which caused the excitement which she had witnessed She surprised those who were present by the accuracy of her description, both of the place and the events

I once asked her "Who is it that goes away ten, twenty or three hundred miles and sees what is transpiring there—is it A?" "No," she replied laughingly, 'A is here sick in bed, she can't go, it is I who go" "Well, are not you A?" "No.' "But do you not belong to A in some way? Are you A's double?" She replied eagerly "Yes, that is just what it is"

I once asked her how she traveled on these journeys "I go so fast," she said, "and I see everything below me It is perfectly lovely" Once she said "I am passing through a shower, you will have it presently" The sun was shining brightly at the time, five minutes later came a cloud, a dash of rain lasting a minute or two, and then sunshine again

There can hardly be a doubt regarding the fact of supranormal visual perception of some sort in the numerous cases reported by the observers whom I have mentioned There certainly can be no doubt but that the scenes and events minutely and correctly described by some of these persons were entirely beyond the reach of vision by means of the physical organ of sight We must either exclude the facts, or else accept some method of visual perception other than that of normal sight

Some, usually those least acquainted with the subject exclude the facts, some, usually those having a competent knowledge of the facts find it impossible to exclude them Those in the latter class endeavor to explain the facts by various methods Telepathy, a psychic medium, a sixth sense, or some magnetic agency are all invoked for this purpose, but all these theories are themselves hypothetical and unproven, and they are called into existence only for this one special service They are all like the cycles and epicycles of the old astronomy—clumsy and unsatisfactory

To see at a distance of 300 or 3,000 miles, through closed walls or at the bottom of deep rivers requires a *personality*—one with perceptive faculties capable of acting under the given circumstances, and able to report what it sees The primary or ordinary personality is not so endowed—its powers of locomotion and of vision are both limited

The subliminal self can, as we have seen, under circumstances at least, act independently of the physical organs, can traverse great distances in a short space of time, can see under circumstances in which ordinary vision is impossible, and what it sees, it is able to report—or impress upon the perceptive organs of the primary self All this has in many instances been actually observed, in somnambulism, in dreams and in the hypnotic sleep

Accepting this subliminal self with its added perceptive powers, brought into activity, sometimes spontaneously and sometimes by the aid of hypnotism, we are furnished with the key, not only to every form of intelligible automatism—automatic writing, trance speaking, hallucinations of hearing (such as were experienced by Socrates, St Paul and Joan of Arc), phantasms and apparitions—but also to nearly the whole range of accredited phenomena pertaining to spiritualism, without trespassing at all upon the domain of supernaturalism

These, then, are our conclusions

That there *does exist*, probably in each one of us, a *subliminal self* or *second personality*, which is able to act at great distances from the physical body, and which is endowed with perceptive powers far exceeding those of the primary self

That clairvoyance is an attribute of the subliminal self, and in that view is perfectly reasonable, natural, and a proper subject for scientific study

That hypnotism is a means of experimentally bringing this subliminal self into action

It is in no spirit of dogmatism, however, that I bring forward these facts and theories, but sufficient facts have now been accumulated from many trustworthy sources, to make it desirable that intelligent thought should be bestowed upon them, and it is with the hope that greater definiteness may be attained in this work—so important as it seems to me, to men in our profession—that I have ventured to draw your attention to this subject

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HYPNOTISM IN THE MANAGEMENT OF INEBRIETY

Read in the Section on Neurology and Medical Jurisprudence at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md. May 7-10 1895

BY T D CROTHERS M D

SUPERINTENDENT WALNUT LODGE HOSPITAL HARTFORD CONNECTICUT

The impression that the continuous use of alcohol is followed by hyperesthesia and increased sensitiveness and susceptibility to the surroundings is not true, only in exceptional cases All inebriates who use alcohol, opium, or other narcotic drugs, have diminished susceptibility and impaired sensory activities, extending from slight defects to general paralysis, not only of the functional but organic activities, and extending to the entire organism

The inebriate is a neurotic, and irrespective of all first causes suffers from starvation and poisoning The power of control of reason and discernment, is defective, and beyond all outside influences is swayed by the unknown impulses of a degenerate and defective organism The power of a dominant idea lasts only as long as it is not in sharp conflict with the morbid impulses of degenerative process

The neuroses of inebriety is practically paralysis, not of one part of the body, but of the entire organism If the hypnotic state is pathologic, and the three special phases, lethargy, catalepsy and somnambulism, are common symptoms, it is clearly possible that the narcotic effects of these drugs may favor these conditions But in reality the lethargy and catalepsy from poisons introduced from without, and formed within the body, are controlled by conditions that are largely unknown and unforeseen From inference it seems clear that any defect or disease of the nervous system in which the excessive use of drugs is a symptom, follows a different line of degeneration from that called hypnosis In one case, general organic degeneration exists, in the other, the power of control is broken up, and follows suggestions from without Of course no state of poisoning from any of the drugs used in inebriety will permit the power of hypnotic influence to dominate the acts or conduct of the case When the poisonous effects of the drug have passed away, then the unstable nerve centers will respond to external influences in various degrees

If hypnotism is a physiologic state resembling sleep, and not an abnormal condition—only a peculiar susceptibility to certain external influences—it would seem that the inebriate seldom would, if ever, be affected by it The observed facts vary widely, and are not sufficiently clear or well attested to form the basis of any authoritative conclusions The few observers in this special field have not found the same conditions even in the same cases, and at different time widely varying degrees of susceptibility have been noticed On the cessation of the drink paroxysms or when from any cause the person abstains from drink, the reaction is followed by a period of psychical weakness In some cases intense melancholy, or hyperesthetic sensitiveness, and fears of their condition, are fertile fields for hypnotic influence

At this time, there is a degree of prostration and absence of assertive will-power, with strong tendencies to depend on any influences which will afford help Good illustrations are seen in temperance revivals, where at the command of the enthusiastic orator they go forward and sign pledges, make prayers, recite experiences and assert positive changes of life and character These are hypnotic phenomena along coarser lines, and their potency is apparent in the very small number of cases that are permanently benefited In these cases the impression of a dominant idea has become so fixed as to overcome all other tendencies to use spirits again Personal counsel, advice, threats and appeals are followed by the same obliteration of the drink symptom in an equally small number of cases

The inference is that at this period in the progress of inebriety, hypnotism skillfully applied may have a marked value Experience differs widely, and the power of a controlling influence one day is lost the next, and the idea that seems so strongly held at one time disappears later The case which appears to be controlled by the operator, suddenly breaks away and the theories are disproven There seems to be a struggle between the morbid impulses of a degenerating brain and organism, and the power of suggestive thought The latter appears to be both physiologic and pathologic Physiologic when the brain naturally turns for guidance and direction to others, and readily accepts statements of facts which are presented in an emphatic way, and pathologic when suffering from adverse conditions and seeks relief in the promises and suggestion of others The power of hypnotism in the reactionary state of inebriety is apparent in many ways, although not explained or understood, and the permanency of this control is still more obscure The same power in cases who are away from this period, and are termed restored, used to prevent them from taking spirits again, is equally obscure In one instance this power gave the inebriate a special repugnance to drink in a certain old circle of friends, but did not stop him from drinking alone. In another case, he claimed he could not drink in his native city, but drank in a distant town. The power of suggestion that one can not drink again, may hold intact for an unknown period, but its permanency depends on the degree of physical vigor and health, and other influences. This is illustrated in the gold cure specifics. The profound impression made on the organism by narcotic drugs, is strengthened by the hypnotic force of a dominant idea, spirits can not be taken again. This in a certain number of cases is real, as long as the person gives unusual care to his physical condition. If curiosity tempts him to test this statement, the delusion is quickly exposed.

It appears clear that hypnotism is a power in the treatment of inebriety, but its application is limited to cases not under the influence of spirits or drugs. It is not clear that these cases can be so positively controlled, or that command or suggestion will last as long as in other cases. Evidently clearer and more exact studies are necessary on this topic.

Profound hypnosis that is continued from time to time on inebriates varies widely in its action. Some persons assert that its influence is permanent, others say it depends on the presence or proximity of the operator. It is natural to expect that a knowledge of the presence of the operator, and a repetition of the power of control would finally become dominant, to the extent of superseding all other morbid impulses, and in this a cure could be said to follow. It would be a question, whether the susceptibility to hypnotic influence, frequently repeated, is a pathologic condition resembling that which follows the degeneration caused by spirits.

In a case mentioned by Dr. Kerr, in the free intervals from drink in a paroxysmal inebriate, hypnotism was sought and enjoyed. The man was hypnotized often, and the idea that he could not drink, impressed on his mind. He was used to show the power of hypnotism on many public occasions. This was kept up for a long time, until the operator moved away, when the man relapsed. This illustrated the fact observed in other circles, that the frequent hypnotic action will take the place of spirits, and is a condition that is akin to intoxication, and in some cases may be agreeable to the person. I have frequently been conscious of a personal hypnotic influence over certain cases of inebriety which was effectual in restraining them from drink at the time. In all institutions a certain small number of cases never drink in and about the building, irrespective of all conditions. Such cases come and go without restriction, but when away from the institution and its influences, relapse at once. It would appear that both managers and the institutions exercise a hypnotic power which enables the person to keep from drink. The same principle explains the power of faith and prayer asylums, where a dominant idea is urged with great intensity and impulsiveness, and for the time being is made to absorb all other thoughts. In this way the morbid drink impulse is overcome by a class of different ideas, which for the time break up every other thought. This condition has reactions, and the men who are most emotional and absorbed by the suggestions of help and salvation, unbend in private, displaying very opposite traits. This is evidence that the power is hypnotic and depends largely on the operator and the surroundings. It will be accepted as a fact that inebriates are less susceptible to hypnotic influence, and such influence is more transient and uncertain in its duration. Yet this is a power of great therapeutic value in an institution where it can be repeated and made continuous, and where the surroundings are under the control of the operator. To apply it practically it may not be necessary to at once dominate the will of the patient and overwhelm his personality, in abject submission to another's will, only in certain cases. But in all cases the dominance and continuous pressure of suggestion are the essentials. Suggestions that can be carried out and enforced by conditions of surroundings.

By studying these influences on susceptible cases, and forcing their recognition suddenly or slowly, a power of control is built up of practical value. A certain number of inebriates are most clearly held under restraint by the hypnotic influence of certain persons closely associated with them. The death or removal of these persons is followed by a breaking out of the drink impulse.

The special question to be answered is this: have we in hypnotism a therapeutic power of sufficient general application, in the treatment of inebriety and drug narcotics, to demand a technical knowledge of its application and use? It appears that we have. Irrespective of all theories of either the pathologic and physiologic action of this force, its power over the brain centers is assured and demonstrable. As an anesthetic, its application in many cases has attracted great attention, but how far it can be used to control unstable and psychical diseased brain centers is not well understood. It would seem that from the evidence so far, its power in the treatment of inebriety should be utilized in all cases. The operator should first become familiar with the technique, and the general principles of its application, and then put it to practical use and test, the same as any other therapeutic agent.

So far, it would seem the best results may be expected in an institution where the operator can command the surroundings and conditions of the patient. The complexity of all cases of inebriety would most naturally increase the difficulties in the treatment especially in the application of psychic remedies and favorable results are not to be expected in the same proportion or degree as that which follows other means. The fact that a few cases are greatly benefited is the strongest encouragement for its more extended use.

In a summary of what appears to be the sound conclusions of the present knowledge of this agent in inebriety, the following may be stated:

1. The inebriate is a neurotic, and not a good subject when under the influence of spirits and drugs for hypnotism.
2. After the withdrawal of the drugs, a period of marked instability seems most favorable for suggestions. This will be transient unless followed up with persistence.
3. Experience points to the wide extended influence of hypnotism in inebriety, although not known as such, in the psychic forces of public meetings, and the power of dominant ideas impressed with emphasis on the mind.
4. Clinical experience furnishes many facts which seem to prove that in certain cases its value is very marked, also promising from more exact studies greater results.

5 Evidently, hypnotism is yet to be studied and tested by the same methods applied to all therapeutic agents So far, its value in inebriety is established, to what extent and how far it can be used are to be settled by future observers

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PSYCHO PHYSICS OF SLEEP—NATURAL AND INDUCED

Read in the Section on Neurology and Medical Jurisprudence at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY W XAVIER SUDDUTH, M A, M D
CHICAGO

In order that we may more closely follow the line of thought, to succeed let us briefly recite the phenomena of natural sleep

Sleep is preceded by a feeling of drowsiness accompanied by a general feeling of heaviness and intellectual dullness There is also a feeling of weariness of the eyes and a tendency to drooping if not actual dropping of the eyelids The head nods and the individual rouses and yawns and if he is in a sitting posture he seeks a position more comfortable for repose If the person is in a reclining position, various groups of muscles may at this stage of semi-consciousness present the phenomena of spasmodic contraction, the drooping head is raised with a jerk and the contracted limbs are straightened and the whole body assumes a position of complete relaxation

The sensory organs, barring that of touch, are still active,—the sense of hearing being quickened if anything The eyes close and one after another the senses become inactive and the intellectual faculties become clouded The objective mind, no longer in contact with its surroundings, ceases to operate, the subjective mind has full sway and the logical association of ideas comes to an end The sleeper is in dreamland and is no longer astonished at the vagaries of memory or imagination

The number of respirations drops from eighteen to twelve or fourteen per minute, and changes to a costal character, and the quantity of air drawn into the lungs is materially reduced by reason of the diminished action of the diaphragm

The temperature is reduced quite markedly and many persons suffer from coldness of the extremities during sleep, due to lowered heart action

The powers of volition next cease and the sleeper is, to all intents and purposes, for the time being paralyzed There are, however, degrees in the profundity of sleep Only the few are entirely oblivious to their surroundings Most healthy people are what are called, light sleepers,—sleep with one eye open, as it were, and even with the soundest sleeper the duration of profound sleep is brief, not extending over two hours at the farthest

Few persons are capable witnesses upon this subject, simply because it is not their custom to take observations on the phenomena of sleep—they do not lie awake to see

The period of sleep depends upon the individual and his surroundings and needs As we pass through dreamland in going to sleep, so does it form the portal to the waking state Our memory of these hallucinations is vivid or otherwise as we dwell upon them Most healthy persons allow them only a passing thought and pass them by This is an utilitarian age and the dreamer has considerable difficulty in finding an audience "Never tell your dreams until after breakfast" is an old adage that if followed is fatal to dreams, so evanescent are they

A recent writer, Lyman, says "Sleep may be defined, in general terms as that state of the central nervous system in which the higher centers are, to a great extent, in a condition of physiologic quiescence, with all the consequences thereby implied" There has been much discussion as to whether sleep is a cerebral anemia pure and simple, or whether its whole nature is expressed in the term "ganglionic exhaustion" The same author says "there are others, who, while recognizing in experimental results undeniable proofs of the anemic condition of the brain during sleep, still persist in perceiving only one of the collateral and unimportant effects of ganglionic exhaustion To corroborate this most gratuitous assumption of the unimportance of the position which anemia occupies among the causative factors of sleep, they have cited the observation that gourmands frequently sleep after an enormous meal, their red and swollen features meanwhile bearing ample witness to the condition of cerebral hyperemia" The flushed face, however, is no sure criterion of cerebral congestion Dyspneac blood stimulates the vasodilator nerves as well as the vasomotor nerves, and as a consequence the cutaneous system may be flushed while the internal organs are anemic, by reason of the contraction set up by the stimulation of the vasomotor center They forget also that there is a vast difference between a condition of partial stupor engendered by such causes and the physiologic sleep which the laborer enjoys after a day of toil

Webster says "It is a natural and healthy, but temporary and periodical suspension of the function of the organs of sense, as well of those of the voluntary and rational soul, that state of the animal in which the senses are more or less affected by external objects and fancy or fantasy only is active"

Our definition for sleep would be something as follows sleep is a condition of restful repose during which there is complete relaxation of the muscular system with lowered heart action, accompanied by recuperation of vital, nervous and other bodily forces

Lyman also holds that the term sleep, when employed to designate more particularly a condition of rest of the central nervous system is closely allied to that which prevails during activity in certain tissues which are subject to periodical exacerbation and diminution of function, as, for example, the glands The temperature in these structures is found to be much lower during rest than during functional activity It has also been observed that the temperature of muscles is higher during activity than during rest Now, a rise in temperature among other things, means the conveyance of an increased amount of oxygen to the tissues within a given length of time, or, in other words, a condition of physiologic hyperemia "Inversely, rest takes place in the tissues as a consequence of reduced oxygenation and interplasmiatic exhaustion" "That ebb and flow of brain activity (and of the cerebral circulation in consequence) transpire under normal circumstances like other similar manifestations of organic life, in synchronous harmony with the rising and the setting of the sun is proved by the fact that sleep during day time, after a night of activity, is not, and never can be made to be as refreshing as that indulged in after sunset"

Just what influence the diurnal motion of the earth has to do with the interganglionic ebb and flow of the vital forces, I am unprepared at this time to say, but that more credit has been given to this force in the past than should be, seems likely in the light of our present knowledge of physiologic chemistry That sleep is, in a large per cent of cases, the result of "interganglionic exhaustion and cerebral anemia" combined, I am free to admit, but no one who has made much of a study of the phenomena of sleep in the healthy state and especially in children but will admit that there are other elements than those that produce sound refreshing sleep, and *that* in the day time also

Sleep is the natural state of rest for the tired physical or mental organism, but why do infants, animals and men that are not actively engaged sleep? They do not need sleep from the same cause as their more industrious brothers No, another line of causative phenomena must be introduced to account for sleep in a large per cent of cases and that, according to my way of thinking, is found in suggestion

Let us take a familiar example to be found in the habits of the common barnyard fowl They go to roost and rise with the setting and rising of the sun That this is a matter of habit is shown by the fact that they go to roost whenever an eclipse of sun occurs no matter what the time of day There are several ways of explaining this habit In the first place, not having any means of producing light they find their occupation gone with the setting of the sun and they have nothing to do but to retire, then again, their enemies are night prowlers and the fowl find their greatest safety in retirement These experiences have fixed the habit until it has become a second nature with them and all the feathered tribe Pet canaries, however, have to be covered in order to protect them from the light and induce sleep

If the theory of solar control of vital forces were the correct one, why do not all animals sleep at night and not, as is the case with many of them, make that their period of greatest activity? It would appear that the most vigilant and active forms of animal life, in its native state, turn night into day It would therefore seem that habit and necessity are the principal factors in determining the time when nature shall take repose The night prowlers and day sleepers among the brutes seem to flourish in proportion as their nocturnal vigilance is successful, their forced day naps to the contrary notwithstanding

In order to understand how the habit of retiring with the sun or shortly thereafter came to be formed by modern man, it is only necessary to go back in history to more primitive man before he had any means of producing light and credit the same conditions that send the feathered tribe to its roost, to day, with driving him to his cave and to sleep One-half or more of his time was then spent in enforced retirement and sleep, but with the advent of artificial light the wakeful period has been lengthened until now the average city man spends less than one-third and even as little as *one-fourth* of his time in bed and yet seems to get along all right

If he suffers from insomnia it is not from loss of sleep, as is popularly understood by many, but by a disordered nervous system that prevents sleep Who ever heard of a case of insomnia in an otherwise healthy child or adult either, for that matter, that could not be explained on the ground of a disordered mental or physical system?

The idea that brain rest can only be obtained during profound sleep is wholly erroneous It is not essential that a person should lose consciousness in order to rest, and although complete relaxation is essential, it may be obtained in the waking state, and is now taught in all our schools in connection with physical culture exercises

The facts in the case are that most people sleep too much Some of our most noted men have been very light sleepers History tells us that Napoleon needed very little sleep He could catch a ten minute nap in the presence of kings or princes, or in the saddle whenever he needed it and willed so to do The wizard of Menlo Park works days at a time and revives his strength by "cat naps" and says, judging by his own experience "No healthy person requires more than two hours sleep a day, and that there is no excuse for people not utilizing twenty out of twenty-four hours for study or work of some kind" All of which I firmly believe A few minutes sleep at the right time, that is, when one begins to feel weary, is worth hours when one is completely exhausted

The benefit derived is not alone from the sleep, but the relaxation that takes place and the lowering of the frequency of the heart's beats A man's span of life is not measured by the tick of a clock but by the beat of his heart Anything, then, that will keep down the tension of the vascular system to normal, will, everything else being equal, tend to lengthen his days During sleep the rapidity of the heart's action is appreciably modified This is due in some degree to the position assumed There should be a difference of ten beats per minute between an erect and recumbent position in a healthy person and even more in nervous irritable people

In children there is a marked difference between the waking and sleeping state Trousseau examined a number of children and found the waking pulsation 140 sleeping 121, not only this, but the frequency of the respirations is considerably diminished and oxygenation and tissue changes take place less rapidly and consequently nutritive processes are reduced, especially in the brain, unless unconscious cerebration or dreaming is carried on during sleep

It has, for many years, been generally admitted among scientific observers that there is diminished blood supply or a condition of anemia of the brain during sleep It has long been observed that the fontanelles in infants are depressed during sleep but pressed open when wakened Arthur L Durham (1860) demonstrated the marked contrast between the aspect of the brain during functional activity and the repose of sleep

Dr W A Hammond asserted from observations made on dogs and rabbits in 1869 that, "in every instance the pressure was lessened during sleep and increased during wakefulness" It remained for Dr Fleming to demonstrate the practical value of th knowledge of the anemic condition of the brain during sleep by producing sleep on several occasions by compressing the blood supply of the carotids Thes experiments were repeated by Dr J L Corning i 1882 who added the further thought, "that when anemia, within certain limits, is brought about throug the operation of physiologic law or by means of artificial appliances, compression of the carotids, it effects as a concomitant physiologic factor in th production of sleep will be directly in the ratio the interganglionic exhaustion" He based his opinion on the fact that favorable results from compression are more easily produced in the evening than in the morning

It has been cited that the presence of the pneumogastric nerve in the sheath of the carotid militated against the exclusiveness of the theory of cerebral anemia as the cause of sleep I can not see how this in any way interferes, as compression of the nerve would indirectly produce brain anemia by lowering the heart's action and only add to the condition directly produced by compression of the carotids

To the idea presented by Dr Corning, I desire to add the further thought of "suggestion," as an active agent and advocate a *sleep center* governed by the vasomotor center controlling the blood supply of the brain and located in the medulla oblongata at a point extending from the floor of that body to within 4 or 5 mm of the columns scriptorius *Stimulation* of this center causes contraction of all the arteries and consequently rise in blood pressure while inhibition, *paralysis* of this region, causes dilation of the arterial system and marked decrease of blood pressure Fixation of the attention of an individual acquainted with the anatomy of the part upon the multipolar nerve cells, the vasodilator cells, situated in his own medulla oblongata with a view of stimulating their action results in lowering the pulse rate very markedly and if, at the same time, the individual is made aware of the fact that such action will result in producing anemia of the medulla and further reduce the blood supply to the cerebrum and thus produce sleep, he will be affected just in proportion as he has faith in the theory and power of concentration of his mind upon the object desired

It is thus that sleep by auto suggestion is produced But it may be said that sleep so produced is not true sleep but an hypnagogic state We will not quarrel with this statement, but freely accept it and claim there is no difference between hypnosis and true sleep, except in the manner of its induction and perhaps some variation in the order in which the phenomena are produced

In this position we are fully indorsed by Newbold and James In a recent article on the hypnotic state Professor Newbold says "Hypnosis is, in a sense a normal state artificially prolonged" And further it would perhaps be too much to say with Mr Wm James of Harvard, that, "we all pass through the hypnotic state every night while going to sleep Yet the changes which take place in the hypnosis probably do not essentially differ from those of normal sleep"

Accepting the two divisions of sleep, exhaustion and habit, made in this article, we would distinguish between the sleep of fatigue and the hypnotic condition as to the phenomena of invasion, but as for the sleep of childhood and even adult life that comes as the result of habit, and I see no difference in phenomena or subsequent effects, both are normal

Professor Bernheim holds that "there is no fundamental difference between spontaneous and induced sleep" Thomas J Hudson in "The Law of Psychic Phenomena" says "There is nothing to differentiate hypnotic sleep from natural sleep" There are, in fact, many analogies between the phenomena of normal sleep and that of hypnotism" M Liebault (Bernheim's "Suggestive Therapeutics") has very wisely established the fact that "the spontaneous sleeper is in relationship with himself alone, the idea which occupies his mind just before going to sleep, the impressions which the sensitive and sensorial nerves of the periphery continue to transmit to the brain, and the stimuli coming from the viscera, become the point of departure for incoherent images and impressions which constitute dreams "Have," says he, "those who deny, the psychic phenomena of hypnotism, or who only admit them in cases of diseased nervous systems, ever reflected upon what occurs in normal sleep, in which the best balanced mind is carried by the current in which the faculties are disassociated, in which the most singular ideas and fantastic conceptions obtrude? * * * * *"

"In order to fully understand the phenomena of sleep, it is essential to accept the theory of the 'duality of man's mind'" "The broad idea that man is endowed with a dual mental organization is far from being new" "Indeed it may be safely assumed that the conception of this fundamental truth was more or less clearly defined in the minds of all ancient philosophers"

It might not be unprofitable, had we the time, in this connection to inquire as to how far it would be possible by auto suggestion to control our dreams and thus obviate the discomforts incident to unpleasant hallucinations It is sufficient for our present purposes, however, to establish the proposition that the subjective mind is controllable by the power of suggestion during natural sleep and thus show the analogy between spontaneous and induced sleep in this important and particular point

There are many other points of similarity some of which it might be profitable to indicate at this time In the first place, recollection of what has occurred during both spontaneous and induced sleep is in an inverse ratio to the depth of the sleep If the sleep is light, then the subject has a more or less vivid recollection of what has passed when awakened, especially if he is questioned before other impressions take their place But profound sleep is dreamless, at least so far as the memory of the sleeper is concerned, although reasoning from analogy, a condition of absolutely dreamless sleep is very doubtful

I think it is safer to say that the subjective mind is ever active and that the reason we are not, at all times, conscious of its continued activity is because of the preoccupied condition of the objective mind Unconscious cerebration is undoubtedly going on in our brain all the time and it is only when it takes a practical turn that we recognize it

Our dreams are often incoherent and absurd, induced by our semi-conscious condition in which our objective minds obtain through our partially paralyzed senses only imperfect impressions of our surroundings, and even these distorted impressions are subject to modification by our bodily condition at the time

We have incidentally referred to telepathic impressions introduced during natural or induced sleep by means of which any desired mental state may be induced at will—these conditions are held by some to be of a pathologic nature but from long observation I am positively convinced that they are harmless unless carried to the extreme, and, as any good thing may be, abused

Every time a nurse puts a child to sleep by rocking or singing to it, she hypnotizes it and suggests pleasant dreams, and the child thrives upon its treatment Men are only grown up children and are amenable to similar treatment and with like beneficial results when judiciously applied What can be more pleasant to a person who has been suffering from insomnia, with its bad dreams, than to have some one who is versed in the science come in and say "Sleep and dream not," and have faith to believe and sleep peacefully through the entire night? Such is being done constantly in these latter days and we venture to predict that the future has a more rational line of treatment for *disorders of the nervous* system than opiates, in hypnotic suggestion which produces normal sleep when applied with that end in view

We have, in the past, associated experimentation and display with the hypnotic state, but we are now entering upon the era of its application and the first and easiest mode of applying it is in the treatment of sleeplessness

100 State Street

DISCUSSION ON PAPERS READ BY *DRS. HOWARD, MASON, CROTHERS* AND SUDDUTH

DR J H HIBBERD, of Indiana—In my judgment the matter of hypnotism is one of great interest in the present state of evolution in the medical mind, in the large field of neurotic disturbances I think that upon a thorough examination of this question it will turn out to be a greatly misunderstood abnormal manifestation of nervous disturbance I do not suppose that any one in the world can be hypnotized who is not willing to be *I take it for granted that there* must be an abeyance of the exercise of will power when one consents to be hypnotized I agree with Dr Patrick when *he says* that there is no such thing as hypnotism at a distance I do not believe, when a subject comes under the hypnotic influence, that the operator has any other *influence* over him than that of suggestion The hypnotic condition *amounts to an unusual* condition of certain parts of the nervous system, of some of the normal senses, and the subject *goes* off into a condition of catalepsy, trance, and finally somnambulism It seems to me, from investigations that have been made, that this is the natural order in which this condition comes about, but by virtue of frequent use and a thorough knowledge of the process that is going on, the subject arrives at *the* condition of trance and by "cutting across lots" he rapidly comes into the state of simple suggestion A larger proportion of the people of the world and no small segment of the medical profession are accepting the statements of those who make a business of going around asserting that hypnotism is due to some psychic force that comes to the operator *from the subject* This, I believe, never takes place, for it is merely a matter of suggestion The suggestion may come directly *from* the *operator*, it *may* come from the surrounding circumstances, it may come by auto suggestion *There are two* ways of arriving at the truth The better way, the scientific way, is by pursuing an investigation and arriving at facts by actual demonstration Results *obtained in this way are never* absolute but are conditional They are true until other facts are elicited, compared and analyzed and made into a new order of things which is for that time the scientific state Another way, which may be called the philosophic method, is that in which *an* inquirer takes up the results *that* have been obtained by a large number of other *people, compares*, examines *and analyzes* them, and after excluding those facts which have no importance to his subject *and those things* which have been shown to be false, he finds *a* certain number of facts that are of very great importance and then he arrives *at a result* which is sometimes correct but is more frequently incorrect By taking, in *this* philosophic way, the facts as *they* may be found scattered over the world, *and* putting them together, there comes *to me* a conclusion which seems to be worthy of being entertained and accorded further investigation It is this to regard the mind as a compound organ, certain parts of which may be in active *operation* and all the rest remaining in abeyance and producing no results A soldier in battle earnestly engaged in the pursuit of an enemy, may be shot while in that condition and has no knowledge of it until he falls from loss of blood or *from* the wound of some nerve This is simply an instance of the intense activity of one department of his mind which ignores the activity of all other parts of his mind *If we keep this fact in our* minds, *we take* away a large factor in the mystery of hypnotism

DR A E STERNE, of Indianapolis—It seems to me that the condition of hypnosis *does not depend* upon the hypnotizer, but upon the hypnotized altogether I believe that any man can hypnotize if the subject can be hypnotized There is and can be no vital force involved I think that hypnotism is yet in its *infancy* *From* the experience I have had with *this* "power" I believe it to be as much, *if not* more, a power for evil than a power for good I have given up the use of hypnotism as a therapeutic agent and *only use it for* diagnostic purposes, *when I use it at all* I believe that every time a patient is placed under the influence of hypnotism, you weaken *an organism* already weakened In the Charity Hospital in Berlin, we worked for a long time under the instruction of *Professor* Jolly, and it was noticed that in almost the majority of subjects placed under this influence very deleterious conditions arose afterward That the school of Nancy, led by Bernheim, goes *too* far, most physicians, I *think*, are inclined to believe I believe we follow more the school of Charcot, *and* that we should discourage such ideas, although we can not exactly deny them, coming from the source they do If *we do not* discourage the ideas advanced by Bernheim we go into a territory that *is not* distinctly *medical*, we *go into* jurisprudence and the possibilities of excusing from acts of criminality, people who *have* committed *crime in* the hypnotic state I do not believe that a person of good moral principles will do a *crime in* the *state of hypnosis, and* if a person does do a crime under this influence, I believe he is just as much a criminal as if he was not under the influence of the second person This is a question that it behooves the medical *profession to take a stand* upon It is a story of life and death very often, as we have recently seen There is an element of *fraud in* all *hypnotism*, it lies in the person hypnotized I have many a time put a blunt instrument in the *hands of* a good girl and she would make plunge with it if told to do so, but when I put a knife in her hand she would not make use of it when directed to do so

DR G J PRESTON, of Baltimore—*In regard to the question* which the last speaker has touched upon, I think it is one which involves very great issues The *fact that it* has been set up a number of times in murder cases or criminal cases as *an* excuse, makes the *question one* of such importance that we can not disregard it I do not altogether agree with *Dr Sterne, for I believe that a person thoroughly* under the influence of hypnotism will do things which in his normal condition would seem very shameful, not to say criminal We are all familiar with the fact of making our friends undress *themselves*, or eat potatoes, or do a great many *foolish* things under the influence of hypnotic suggestions *How* far that can be carried is a question which is by no means settled I remember seeing a great many such experiments performed in Charcot's clinics seven or eight years ago Dr Stanley Hall, at that time professor of psychology at the Johns Hopkins *University*, was interested in the study of hypnotism, and we worked over some particular phases of it, and among others this matter of criminal suggestion I was not *in a position* to know the subjects very well, but I used to see the experiments done over and over again upon old and upon *fresh* subjects, of giving them a knife, or some harmless powder said to be a deadly poison, and suggesting *their criminal* use *There never* was any hesitation in carrying out the hypnotic suggestion It may be that criminal suggestion is something that has a very *unfortunate* future before it I quite agree with Dr Sterne that we should not regard it *as an* excuse at all, and should educate the popular mind into regarding *it* as no more of an excuse or perhaps not as much *an* excuse as drunkenness I am satisfied that a great amount of hysteria is caused by hypnotism *This is* not so evident in this *country* as it is abroad Any one who will follow the work of some person who has been exploiting hypnotism in one of the larger hospitals abroad will see an enormous crop of hysterics that has sprung up around these unhealthy mental experiments I use *hypnotism* a good deal myself in certain selected cases, I have never had very much success with *inebriety*, although perhaps *some* *I have* had some success with sexual perversion, and have had a good deal of success in treating ordinary hysteria I have never seen any bad results from hypnotism used in a purely therapeutic way The number of persons who can be hypnotized is certainly very limited I should say 10 per cent was a very high average in this country

DR E S PETTYJOHN, of Alma, Mich —I beg leave to disagree with the author's theory to the effect that a man can do as much work on two or three hours' sleep as he can do on the allotted time of eight hours I wish to speak in this connection of two cases that have come under my observation One of them, a school teacher, retires after her year's service to her country home She is very much exhausted, weak and anemic She then sleeps on an average twenty hours out of the twenty-four, taking one or two meals a day This she continues from four to six weeks, after which time she comes out like a butterfly from a cocoon She is then as bright and hearty and strong as if she were a young woman again The other case is that of a school teacher and is quite similar I would like to ask if that is not a recuperation of brain cells by prolonged rest and sleep? The brain cells themselves have not the power of muscular activity and so the process of elimination must come from rest Elimination and repair of the muscular system can be accomplished by the activity of the muscular tissues, but in inactive cells these processes must be secured by rest and how can this better be secured than by the agency of sleep? I would like to see it proved that a man or woman can do as much work on two or three hours' sleep as upon the amount usually taken

Dr B D Evans, of Morris Plains, N J —I think the matter of hypnotism, like a great many departments in the study of medical agencies, is at this time carried to at least an enthusiastic, if not to an unreasonable extent Most persons who claim to be hypnotists or have the power of hypnotizing subjects, are necessarily enthusiasts I have noticed another thing that they have, as a rule, a large number of cases that can not very well be verified by the testimony of any observer I mean by this, that an enthusiastic hypnotist gets results that another person observing does not appreciate, and that if the cases operated upon are taken and studied apart from the person who believes he has operated upon them, that these cases will give a very different testimony to others from that which they give to the person who says that he has hypnotized them The point made by Dr Sterne and Dr Preston, that a very small percentage of persons are subject to hypnotic influences, is borne out by the limited observations I have made along this line The power of suggestion is admitted by all observers I am inclined to think, in regard to the matter of hypnotic suggestion, that the results are obtained principally upon people of a neuropathic organization In all cases that have come under my observation or that I have inquired into I have found that the subjects were people of very limited intelligence or of extremely bad heredity In the animal kingdom this seems to hold good The rabbit, for instance, which is a very stupid creature is said to be readily hypnotized

Dr W S Watson, of Fishkill-on the Hudson N Y —We are hearing a great deal lately, of the evil doings of individuals being ascribed to the influences of other people I believe there must be first a willingness on the part of the subject before it is possible to hypnotize him It is my experience that if my subject is not willing, I am powerless to do anything with him I believe that there can and will be much good come from hypnotism, but I think there should be some very stringent legislation against the public hypnotizing which is practiced in this country

Dr W J Herdman, of Ann Arbor Mich —I can not agree with the statement that hypnosis is not injurious to the subject of it I think there is no question but that it has a deleterious influence I have had two girls under my care who were the subjects of auto-hypnosis They were both sophomores in college One of them had had a severe attack of la grippe As a result of that, she fell into a state of auto hypnosis Her room mate, by "suggestion" probably soon exhibited the same state They were rooming in the house of a lady who had formerly been their teacher but had married a Professor Their condition was discovered by this lady who went into their room and found them both apparently in sleep but while "in sleep" engaged in conversation As they had been children together, while in this condition they talked over the events of their childhood In the case of the first girl this condition lasted only three or four weeks She recovered under treatment for her impaired nervous condition It was three months before the other girl came into a moderately normal condition During this entire period I never made the slightest attempt and did not permit any one else, to throw them into this condition Every time they were found in that state it was by auto-suggestion During the course of treatment of the second case, I asked the lady in charge to bring the young woman to my office She would sometimes drop into the hypnotic state on the street, but usually not until she came into my waiting room which was somewhat warmer than the street I went through every possible test for the condition of the nervous system As the ophthalmologist had his office in the same building, I took her into his dark room and he examined her with the greatest care as to the condition of her eyes During this ophthalmologic examination she was in a state of somnambulism When she was awakened she did not remember that she had ever been in the dark room I had her also in one of my examining-rooms during hypnotism and she could not recall, when awake anything that was in that room Not to make a long story of it, when she fully recovered from this abnormal condition the consciousness of what occurred in that state came back to her and she would recollect the experiences as of a dream She would, while in a hypnotic state at home, recount to those about her, her experiences in my office and in that of the ophthalmologist When she was awakened from that state and questioned about it she knew nothing about those circumstances This young woman is perfectly honest and perfectly straightforward That is her record from early childhood She came into my office once with a friend, after I regarded her as perfectly well She asked me if there was not in one of my inner rooms, a painting I said "yes," and asked if she recollected anything about it She inquired if it was a marine scene I said yes, and asked if she remembered any of the figures in it She asked if there was not a ship in it and a buoy, and this she did as if she were trying to recover a memory of something that had made but a faint impression on her mind She went on recollecting thus one thing after another as if by a great effort of memory In the same way she went through the details of the ophthalmologist's dark room, of which she had no recollection whatever some months before when in her normal condition Now it appears as if she had registered upon her mind in that condition something which was shut out of her mentality when in her normal condition While in the hypnotic condition she would always talk with her room mate about the experiences of her childhood She was then, to all intents and purposes, a child in her manner, speech and allusions On one occasion when she was in the hypnotic state in my examining room, one of her former teachers who had known her very well as a child, was present I asked her questions which she answered in a jerky, petulant way, quite the contrary of her normal manner for when she was herself, she was a perfect lady The Professor exclaimed upon hearing her answer "If that isn't that girl as she was at 9 years of age and exactly as her brother is now, that is a family characteristic" Subsequent experiences and culture had built upon this "family characteristic" and had given her the refinement of manner with which I was familiar, but in the hypnotic state she had gone back to that stage of brain registration which was characteristic of her childhood

What I started out to state was this that the series of experiences undergone by that girl unquestionably weakened her mind Since that time she has been engaged in school teaching Only yesterday I learned that there is something of an arrest or deterioration in her mentality, that she is unable to concentrate her mind as formerly She passes often into a dreamy state and is unable to use her mind as she did three years ago I am satisfied that there is a dissipation of energy in hypnosis, whether it is auto hypnosis or brought about by somebody else's "suggestion" There is a voluntary or involuntary inhibition of the higher centers of brain activity, and by frequent repetition this tends to mental weakness and, as has been stated by Charcot time and again, such persons are likely to become hysterical and purposeless if they were not so previously I regard this study of hypnotism as most valuable to us by reason of its giving to us the knowledge of the physiology of mental action It is no wonder we know so little about its true significance, since physiologists can tell us so little as to how the brain is connected with mental activities Until they can give us more definite information of physiologic psychology we can have still less of pathologic psychology I believe hypnosis to be a mental state closely allied to sleep and also very closely allied to those conditions which we term hysteria

Dr Hugh T Patrick of Chicago—We can not hope to settle the question of hypnotism in this discussion, but it would seem to me desirable to have an expression of opinion in this Section at this time That there is such a thing as hypnotism, I think goes without saying That it may be deleterious, I think goes without saying That its practice should be restricted, I think goes without saying But I would make two pleas, first, that it be accorded a place among our diagnostic and therapeutic aids, a place as limited as you will, personally, I *think it must be* exceedingly limited, but still, a place Second, that it constitutes no short cut to therapeutic success He who would use it must be the well educated, careful, wise physician still

DR W X SUDDUTH, of Minneapolis, Minn —Dr Pettyjohn wanted to know if sleep is not a therapeutic agent If his teacher had broken her hours of work by frequent naps she would not have needed the twenty hours of sleep As to whether hypnotism is an injurious agent or not, depends entirely upon the way it is induced and the individual upon whom the operation is performed I am a living example of nine years use of auto-suggestion In 1882, from nine to ten hours office work and five to six hours microscopic work at night, I broke down with nervous prostration In the summer of 1885, in the old town of Heidelberg, I mastered the matter of auto suggestion by which I could put myself asleep for any time I wished I was so weak that I could not walk more than a quarter of a mile at a time I would go into the forests above Heidelberg, walk as far as I could, and then put myself to sleep for a few minutes at a time Inside of a year's time I had increased my weight to 210 pounds and made a corresponding increase in strength At the present time, I do twelve hours of most intense work daily I breakfast at 7, work from 8 to 12, then have dinner, and take a nap after dinner till 2 o'clock, then I work till 6, get another meal and at 8 o'clock begin my literary work and keep it up till 12 or 1 o clock and then I go to bed and sleep four or five hours I have kept up this routine for nine years, and am in better mental and physical shape than ever before in my life The case of the two girls brought before us by Dr Herdman was not hypnotism at all but simply hysteria The very fact as the Doctor goes on to state, that they have since suffered from mental disease, shows that it was a premonitory sign of mental disease Hysteria can illustrate every stage of hypnosis that you ever heard of

Another point mentioned was that the enthusiasm of the practitioners of hypnotism makes them not good observers I have been in nearly all the laboratories of Europe I have spent fifteen years of solid work on that subject I have not been in practice, I am a student in morbid psychology I have hypnotized at my home on an average twenty five to fifty persons a week They are not hysterical people, but students of the universities I have been connected with The best subjects I have ever had have been those of the greatest vitality the best physique and greatest ability The poorest subjects are those who are weak minded The best results and the quickest results have been with other classes of subjects There are three classes of people who can not be easily hypnotized idiots, because they have no will power, insane people (barring melancholia), and skeptics You can not hypnotize an individual who has no faith in you You can not hypnotize children under 5 years of age I make a distinction between mesmerism and hypnotism and if I had time could prove it to you very plainly Mesmerism appeals to the natural attention, which is common to man and the lower animals Hypnotism appeals to the educated attention I do not use mesmerism I believe that when you set up a machine to mesmerize people and put them to sleep it may be injurious The only results I have ever seen that have been bad were produced in cases where mechanical means were used to mesmerize the subject If you work on hysterical people, you get hysterical results Charcot worked in an hysterical atmosphere In fifteen years of constant use of hypnotism as a means of studying psychology on normal healthy persons, I have never had but one case that showed any hysterical symptoms whatever There are laboratories in Europe which report from six to twelve thousand cases The men I have seen there and the reports which I have received from there, have not shown any deleterious results from hypnosis Where patients were were in the pathologic condition to begin with, you might observe bad symptoms, but such symptoms would have been observed after the administration of ordinary drugs If you put a normal atmosphere about it and use normal methods on healthy individuals, the time will come when hypnotism will be almost a household remedy

DR A E STERNE—I hope the time spoken of by the Doctor will never come I don't want to see hypnosis used in my family We have not to deal with normal conditions as physicians From our standpoint as practical therapeutists I don't want it used

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OPERATIVE TREATMENT OF PURULENT DISEASE OF THE ANTRUM OF HIGHMORE, WITH EXHIBITION OF NEW INSTRUMENTS

Read in the Section on Laryngology and Otology at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md May 7-10 1895

BY WALTER J FREEMAN, M D
Adjunct Professor of Laryngology in the Philadelphia Polyclinic Consulting Laryngologist to the Pennsylvania Institution for the Deaf and Dumb, etc
PHILADELPHIA

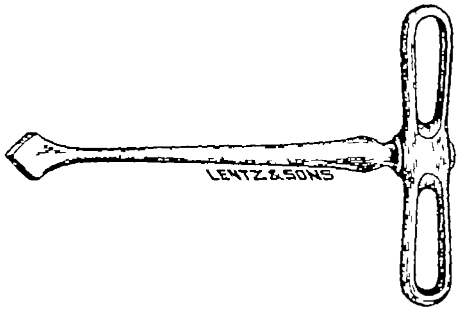
In considering the operative treatment of purulent disease of the antrum of Highmore, I shall speak only of operations for chronic disease Acute purulent cases, which in my experience are of much more frequent occurrence and much oftener of intranasal than of dental origin, seldom require more than the removal of the cause and appropriate local and constitutional remedies

Antrum operations naturally divide themselves into two classes the intranasal and the intra-oral Each has its advantages, and many methods have been devised to meet the indications demanded by the two positions Until recently the general rule has been to open the antrum at its lowest attainable point, in order to secure the best drainage, as with scarcely an exception the importance of drainage was especially urged as the *sine qua non* of correct surgical treatment for it was not deemed inexpedient to have such a pus cavity draining into the mouth, month after month Over one hundred and twenty years ago, however, Hunter, by indicating the middle meatus as a seat for operation, pointed toward other desiderata than drainage While giving due weight to the surgical importance of drainage, we must recognize not only the disagreeable features of pus flowing into the mouth and its injurious effect on the digestion and general health, but also—thanks to Miller—the positive dangers thus engendered, not to mention the great difficulty of healing a cavity so exposed to irritation and re infection from entering food particles and microorganisms

Operators are widely divided as to the best course to pursue in treating this sinus, but most of those who now advocate opening the antrum into the mouth *for the purpose of drainage*, after introducing a drainage tube, *plug it*, to prevent discharge into the mouth or entrance of foreign substances into the cavity Two only, I believe, dissent from this plan Bosworth, who holds that the plug is unnecessary, and Zarniko, who asserts that neither tube nor obturator is required, but that the opening through the alveolus remains closed by a blood clot until this is driven out at the next irrigation

I do not wish for a moment to condemn intra-oral operations, on the contrary, I find them indispensable in certain cases But as presenting fewer objections and offering many advantages not obtaining from this position, I wish to direct more attention to the intranasal methods, and to urge a more careful comparison of the two positions Should we have, for instance, an empyema of the maxillary sinus with a diseased molar or bicuspid as the exciting cause, what more proper than to have the tooth extracted under nitrous oxid gas and a so called drainage tube introduced? The tooth cavity can at this time be reamed out to admit a tube from 4 to 6 mm in diameter and as the tooth *must* be removed it adds but little to the severity of the operation to insert the tube and thus secure, *not drainage, but means freely to irrigate and medicate the cavity* The most desirable apparatus though rather expensive, is a gold tube with a collar fastening it securely to a neighboring tooth, but there is great risk of damage to the sound tooth

Again, let us suppose that after unsuccessful treatment by way of the alveolus or by one of the intranasal forms of operation, we suspect that either a foreign body or a growth is keeping up the irritation It is obviously necessary to make a thorough exploration of the cavity, and now the Dessault-Kuster operation through the canine fossa is the proper one In connection with this, I wish to present a convenient form of drill, which has proved so satisfactory in my hands that I feel justified in bringing it to your notice You will observe that the blade cuts in both directions by a series of half turns, and so penetrates bone very rapidly, and while it cuts a circular hole like a trephine, it is less apt to catch in the soft tissues and lacerate them, as that instrument tends to do in this position The diameter of the perforation, nine sixteenths of an inch, permits the exploration of the cavity with the little finger, or the introduction of an electric lamp or small mirror, or even the overlooking of the sinus by ordinary reflected light After carefully exploring the cavity, removing any cause of irritation, curetting if necessary and breaking down bands, pack lightly with iodoform gauze While Kuster removes the packing in a few days and puts in a drainage tube, Grunwald changes the gauze every three or four days for several weeks before doing so For my own part, I prefer packing daily with thymol iodid gauze for a week and then fitting a large diameter obturator of metal or hard rubber, which is held in position by the pressure of the cheek This allows direct applications to be made to the interior of the antrum, and the progress of the case to be watched



With the exception of the usual and comparatively useless procedure of introducing a small caliber tube through the alveolus, the intra oral operations are best done under a general anesthetic I do not use the phrase, "useless procedure," unadvisedly, I have watched for drainage in such cases, even where the tubes were 2 mm in diameter, and have not seen a trace of pus come down, the cavities at the time being full Again, I have filled the sinus with water and it would not drain, although the ostium maxillare was patulent This can be explained partly by the tubes entering the cavity too far, and partly by the peculiarly thick and tenacious character of the pus It is extremely difficult to judge of the necessary length for these tubes, and it has been suggested to have them fenestrated, but I feel assured that the formation of granulation tissue would offset this advantage It is only when the empyema is getting well, Zarniko's statement to the contrary, notwithstanding, that the discharge becomes milky and flocculent and capable of draining away through a tube of small diameter

We see, then, that the intra oral methods are in many ways not only exceedingly disagreeable to the patient (and not the least of these objections is the necessity for general anesthesia), but even dangerous if the tube is left open, and surgically a failure with reference to drainage if the tube is closed Drainage, moreover, is clearly not the chief consideration, for free drainage is usually secured for many hours at night through the normal openings, by lying on the back or on the sound side, and yet spontaneous cure in these chronic cases is rarely observed Even in the erect posture the tenacious pus once started by the air current, as in sniffing, continues to flow and m empty the cavity Braune has experimentally shown that the air of the antrum can be partially exhausted by forcible inspiration, so that in acute congestions we may even get somewhat of a cupping action by this means

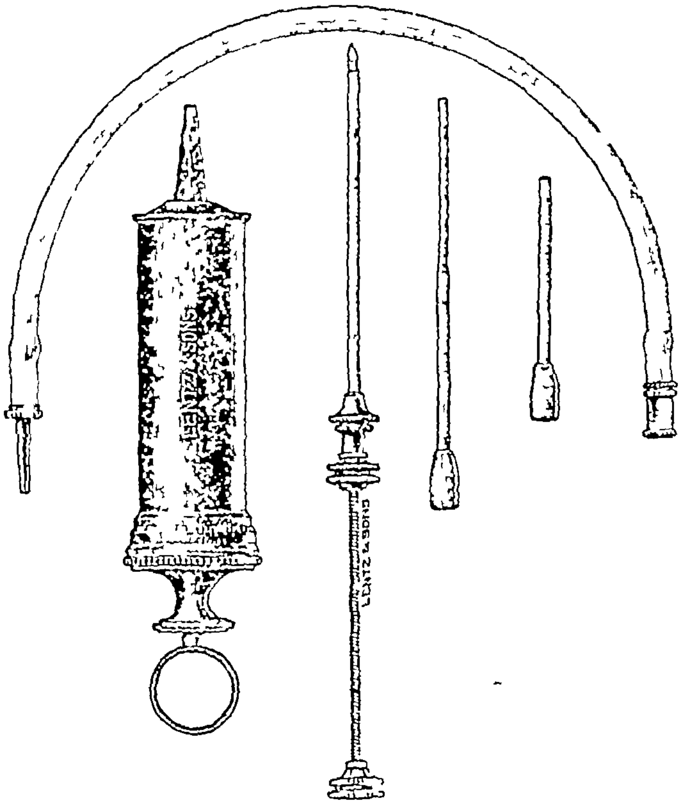
Let us turn now to the consideration of the intranasal methods We will speak of treatment through the middle meatus only to condemn it in unmeasured terms, whether it be through the normal openings, as first suggested by Hunter, or through an artificial puncture, as advised by Hartmann Chiari was able to get pus by way of the ostium maxillare in but one of twenty-eight cases of empyema, and Frankel has been unable to cure a single case by this method. While it is difficult and often impossible for the physician to irrigate the antrum by way of the middle meatus, it is manifestly out of the question for the patient to do so Then, too, the Hartmann puncture can be done only at the risk, as Zuckerkande has shown, of wounding the orbit, or of severe hemorrhage from large blood vessels on the outer wall

Operations through the wall beneath the inferior turbinal, on the other hand, are of real value Mikulicz, in the operation, proposed by him about ten years ago, makes an opening three-eighths of an inch broad by five eighths of an inch long, far up under the inferior turbinal, where the wall is usually quite thin Through this large opening the pus can drain quite freely into the nose, although the perforation is at times some distance above the floor of the antrum It is not, however, an operation to be undertaken lightly, for the pain without total anesthesia is considerable, and the hemorrhage frequently demands tamponing of the naris for twenty-four or forty eight hours This operation, then, is to be ranked with that through the canine fossa for severity, while it is inferior, in that it allows no examination of the interior of the sinus Even with so large an opening, however, some patients, Frankel states, are unable to cleanse the cavity themselves

Less objectionable, though still possessing serious drawbacks, is the Krause method He penetrates the outer wall of the inferior meatus far up and back with a strong curved trocar and canula, washes the cavity once and insufflates iodoform But he puts nothing into the opening to maintain its patulency, and so every second day the canula, armed with an obturator must again be forced into the cavity If one considers how rapid the healing of such punctures is, and the great tendency there is for granulations to form, he will realize that the treatment con stitutes really a series of operations which must be done under cocain Bloch objects to this method, on the ground that the opening is extremely difficult to find While some of Krause's cases are cured in a few weeks, others continue treatment for months, and few could be found in this country to submit to such an ordeal Another objection to this method is that the patients are unable to carry out the treatment themselves Again, both Krause's and Mikulicz instruments are too large to be used in making a trial puncture, so that the diagnosis in obscure cases must be confirmed by another method before undertaking theirs

While many ingenious methods have been devised for the intranasal operations, one very important thing seems to have been overlooked, viz, a simple and practical means of keeping open the perforation, so that the treatment may be readily carried out by the patient as well as the physician To overcome this objection has been my principal aim in the operation which I now present In suspected cases of empyema it is often necessary to irrigate the cavity, as first proposed by Ziem, to determine whether pus be present While he prefers to make the puncture through the alveolus, the majority of operators lean to the intranasal position Lichtwitz goes so far as to make a trial puncture under the inferior turbinal, and finding pus, operates upon the sinus through the mouth Following him, I also use a straight trocar and canula, but instead of making the opening as he does in the Mikulicz Krause position, I perforate low down and more anteriorly The nasal duct lies from 30 to 35 mm from the naso-labial junction, and unless it opens in a furrow, its exit is high up under the turbinal As I keep close to the floor of the nasal fossa, I may at times have to penetrate thicker bone, but this is quickly and almost painlessly done, and the disadvantage is compensated for by entering the cavity near its bottom and thus securing better drainage, while the risk of injury to the tear duct is avoided and a resting place for the head of the tube is obtained inside the pyriform aperture The inferior turbinal and naso antral wall beneath it are first anesthetized with 10 per cent cocain solution, using this trocar and canula, a few taps with the mallet causes it to penetrate the wall the entrance into the antrum being unmistakably recognized by the absence of further resistance Withdrawing the trocar, warm sterilized normal salt solution is at first gently, later with considerable force, syringed through the cavity Should the water return perfectly clear, even after repeated flushing, remove the canula and no harm results' I would emphasize *repeated* flushing, for in one case I used over a pint of water before obtaining a trace of pus, but finally washed out a pus cast of the cavity, the presence of which had caused a marked edema of the eyelids on that side When pus is present, however, I do not remove it at once, but reintroduce the trocar, remove the two nuts and holding the trocar accurately in place, the hand resting against the patient's face, withdraw the canula It is to render this possible that the trocar is twice the length of the canula I now slip a drainage tube over the trocar till it penetrates the cavity and withdrawing the latter, complete the washing of the sinus by syringing through the long silver tube in the set (the wash tube), which accurately fits the permanent air is blown through to dry it, and then an antiseptic powder is insufflated The operation, including cocainization, and treatment, takes but eight minutes, and few complain of any pain The physician should treat the case for the first few days until the nose becomes accustomed to the tube, later, the patient can learn in a minute to pass the wash tube and cleanse the cavity for himself

Before undertaking any operation on the antrum, its position should be determined by grasping the three points forming, as I call it, the antral triangle—the thumb in the canine fossa, the first finger on the malar process and the second finger on the edge of the orbit Within these boundaries must lie the antrum, and knowing this, one can hardly go astray The set of instruments necessary for this operation consists of a trocar and canula, silver drainage tube and a mallet, for irrigating the cavity, a wash tube, syringe and rubber tube with connections The drainage tube may readily be cut down to fit the case The trocar is 16 mm long and 3 mm in diameter



The canula is steel, as softer metal splits in penetrating thick bone The wash tube goes nearly through the drainage tube in order to free it of any accumulations

Among the many advantages of this operation are 1, the ready acquiescence of the patient, 2, the celerity and slight degree of pain with which it is done, 3, the completion in one short séance of the diagnosis by lavage, and the operation for therapeutic purposes, 4, the small wound and the loss of only a few drops of blood, 5, the ease with which patients are able to treat the cavity themselves, and 6, the fact that total anesthesia, and therefore assistants, are unnecessary

The disadvantage is that the cure is delayed beyond that reported for some of the other antral operations, but when once healed, these cases do not seem to have the reported tendency to recur With the enlargement by one-third, of the caliber of the over those I used four years ago, the cases have method of treatment the outlook is most promising The cases which have resisted treatment, and which have shown no progressive tendency to improvement under irrigation, have usually revealed some cause for the continuance of suppuration on exploring through the canine fossa The ease with which remedies may be applied to the antrum by this method leads me to hope that others by following this line may suggest more successful remedies Iodoform is out of the question in one's private practice and Chiari denies that it gives the positive results claimed for it by Krause, Siebenmann and others All operators, however, acknowledge the excellent results obtained by packing the cavity with iodoform gauze, and Chiari packs it even through the 4 to 6 mm opening in the alveolus, which he recommends

In closing, a few words of caution suggest themselves Do not attempt to aspirate the cavity The blood vessels are but illy supported and the normal openings being closed, you may cup the cavity as I did with my first case Do not syringe with strong solution of peroxid of hydrogen, as advised in many books Even after the cavity has been irrigated, some pus remains, and the pressure from the liberated oxygen, except with very weak solution, causes intense pain

Do not make an exploratory puncture through the alveolus where dental caries exists, or you may readily infect a healthy antrum

1720 Locust Street

DISCUSSION

Dr Geo C Stout, Philadelphia—We should all feel grateful for any light which may be thrown on the treatment of these obstinate and hitherto refractory cases Dr Freeman's apparatus seems most complete and will add materially to our present technique, which by means of these instruments will be clear cut and esthetic I have now two cases going around with silver tubes in their antra which were introduced through the inferior meatus These cases have not been cured, and the only advantage gained by the wearing of the tubes is a decrease in the disagreeable odor and a lessening of the viscidity of the discharge These tubes have been worn three months and over No favorable results were obtained from the introduction of any medicaments into the antrum, although many were used persistently for some time The pain experienced in introducing the trocar was slight after cocainization excepting on one occasion, when I attempted to introduce it low down near the floor of the nose, and in this case found the wall so thick *and the pain so severe that an attempt to* perforate it higher up was advisable

Dr Holbrook Curtis, New York—I had two questions to ask Dr Freeman before I heard the remarks of Dr Daley, the first was "How many cases of empyema of the antrum are associated with polypoid degeneration of the tissues within the cavity?" The second was 'In how many cases in which he had introduced his tube had he observed an inflammation of the tear duct?"

In my practice I have found the condition of a majority of cases necessitated a free opening either *through* the alveolar cavity or the canine fossa, and packing or curetting I regard the method advanced by Dr Freeman to be of value from a diagnostic standpoint but as a method of cure of empyema of the antrum generally speaking, the method is insufficient and unsurgical

Dr. Casselberry—If one is to open the antrum *in any* case through the nasal wall the instruments and method of Dr Freeman are most perfectly adapted to the purpose It is certainly an improvement on the means employed by Mikulicz or Krause for perforating through the nasal wall, because it provides a canula for continued drainage which can

strated on the patient present is readily accessible to the *patient for self-injection of antiseptic lotions The method of drainage through the nasal wall is best adapted to cases* which are not of dental origin, and in which the teeth are all sound and one wishes to avoid the extraction of any of them It would also serve in any case as an exploratory puncture, to make certain the diagnosis, and as a preliminary treatment *to ascertain if cure will not ensue simply on* the establishment of drainage for a brief period As a rule, however, and always in cases of dental origin, I prefer an opening through the alveolar process, via the socket of the first or second molar tooth A canal about one fourth of an inch in diameter can be made and through it one can curette the antrum to ascertain if there are polypi, granulations or inspissated pus which might delay recovery if undiscovered Then *a gold drainage tube is inserted and worn until* recovery, or for a year or more, when, if a discharge still continues, it becomes a question as to whether a radical operation by a *large opening in the* canine fossa and iodoform packing should be done

Dr B Alex Randall, of Philadelphia, said—I have had little experience personally treating these chronic cases, as I have generally transferred them to laryngologic colleagues but have seen many treated by Dr Freeman's and other methods, and am very favorably impressed with the reasonableness of his procedure We may not be such 'promising medical men" like Dr Beard whom Dr Daly mentions, as to run the same risk of a fatal result, but if my recurring acute antrum trouble ever becomes chronic, I expect to be 'buncoed" at Dr Freeman's hands and *cured* like many of his patients The danger of aspiration of the antrum to which he referred I can substantiate by my personal experience in totally darkening my antrum in a few hours with extravasations through unthinking 'sniffing" in the effort to free the stenosed nares

Dr Freeman (in answer to Dr Stout)—In answer to Dr, Stout, I would ask why he does not operate through the canine fossa and see why the suppuration continues in his cases? When my cases do not progressively improve under the intra nasal method, I seek the causes by exploring through the canine fossa

Dr Klein, who advocates the operation through the alveolus, and the placing of a wire drainage tube, is already answered in my paper The drainage into the mouth is most objectionable

Dr Daley, who is against any but the radical operation through the canine fossa with thorough curetting is answered by the death of the case which he reports in the practice of a New York surgeon, where the antrum was opened through the mouth and septic pneumonia resulted I do not think we are warranted in subjecting our patients *unnecessarily* to this risk Why not continue treating patients by my method, after making an exploratory puncture through the nose? If they do not improve and get well then turn to a more radical method of operating

Dr Curtis asks as to the frequency of polypi of the antrum in chronic empyema I have not found any, and Zuckerkande in his many examinations has found but very few I think many may be deceived by the peculiar swelling to which the mucous membrane lining the antrum is liable on the least irritation It may be so great as even to obliterate the cavity With regard to his other question, whether I had had any case of epiphora, I answer, no, and for the reason stated in my paper, I penetrate below the opening of the tear duct

Dr Casselberry pertinently asks what percentage of cures I have had I have already forestalled this question by speaking in my paper of the possibly slower cure by this method I think if carefully examined, however, my results will compare very favorably with those of others Four of my earlier cases were clinic cases and withdrew from treatment before I had perfected the method Four case I considered total failures and operated on through the canine fossa ten months ago These cases are still discharging, although I carried out fully what Dr Daley advises I only say I wish I had left in the tubes, then at least they were comfortable, now far from it I report six cases of cure among some twenty two antra involved, which sounds like a small percentage These have remained well at least a year Three of the twenty two were done for other physicians and are not under my care Of the four remaining three are —so to speak—recent and are progressively improving

The last case is one of eighteen years standing, now under treatment two and one fourth years As I have cured one

SCROFULOSIS, CHLOROSIS AND TUBERCULOSIS AND THEIR TREATMENT

Read at the meeting of the Mississippi Valley Medical Association, held at Detroit, Mich , Sept 3, 4, 5 and 6, 1895

BY GUSTAV FÜTTERER, M D

PROFESSOR OF PHYSICAL DIAGNOSIS CHICAGO POLICLINIC, CONSULTING PHYSICIAN DEACONESS HOSPITAL ' LIGHT AND HOPE "

I —TUBERCULOSIS AND ITS DIRECT CAUSE

During the present century, medical writers have been very active on the subject of tuberculosis, and we can readily understand this activity when we remember that nearly one-seventh of the human race die of this disease The disease commonly recognized as consumption has been known since the Dark Ages Even Hippocrates has given a good descriptionof it, at least in reference to lung and pleura, finding the characteristics of this morbid process in a suppurative destruction of the affected organ Later on, the above-mentioned suppurative destruction was found in other organs also, but as the changes found in the lungs were predominant, not only in the clinical picture, but also in the anatomic findings, those changes in the other organs were believed to be of a secondary nature, the tuberculosis of the lungs being primary It was observed that the formation of certain nodular bodies preceded the decay or destruction, and each one of these nodes being called a tuberculum, the name of tuberculosis was given to the disease as a whole Certain small dewdrop like nodes were named miliary tubercles by Bayle at the commencement of this century, and Laennec, the celebrated French pathologist, saw the gray miliary tubercle changed to a yellowish color and undergo the so called cheesy degeneration, which he thought to be characteristic of tuberculosis, against which Virchow protested, claiming that other than tubercular inflammatory products could also undergo the process of cheesy degeneration

Tuberculosis has been regarded as an infectious disease for centuries, but the cause and consequently the modes of infection remained a mystery until Klencke and later (1865) Villemin demonstrated this belief to be true, by transferring parts of organs of man and animals afflicted with tuberculosis into the bodies of healthy animals, thus causing general tuberculosis in the animal experimented on Villemin caused general tuberculosis by implanting parts of scrofulous glands under the skin or into the peritoneal cavity of animals, proving that certain forms of scrofula, in fact most of them, are of a tubercular nature Waldenburg, B Frankel, Buhl and others, repeated the experiments of Klencke and Villemin with the same results, and they came to the conclusion that the cheesy material must either be invaded by or give birth to the infectious substance Cohnheim and Klebs believe in a primary invasion of the infectious substance, which then causes all the anatomic changes which tuberculosis brings about, and is at last contained in the cheesy material Charcot and Aufrecht fed animals with parts of tubercular organs, and Tappeiner made them inhale the dust of a dried sputum from consumptives, with the result of producing tuberculosis in the animals

It was now to be expected that the ultimate cause of tuberculosis would sooner or later be discovered, and in the year 1882 Robert Koch published the discovery of the bacillus tuberculosis as the cause of all forms of tuberculosis Koch invented a process of staining the microorganism, which when unstained had hitherto been invisible even with high magnification, and he was thus enabled to demonstrate their presence in all forms of tuberculosis, and their absence in non-tubercular morbid conditions of the animal body He also succeeded in culturing them and again producing tuberculosis by inoculating small parts of such pure cultures into animals This latter experiment closes the chain of proofs of the fact that the bacillus tuberculosis Kochii is the cause, and the only cause of tuberculosis in man and animals For particulars in reference to this discovery and all details, I refer the reader to Koch's *Ætiologie der Tuberculose, Mitheilungen des Kaiserlichen Reichs Gesundheitamtes*, Berlin Bd ii, 1884 Watson Cheyne, Rosenbach, Fluegge and many other competent investigators have repeated Koch's experiments in all their details, and they have all confirmed his results

Now that the tubercle bacillus is thus known and recognized, medical authors have begun the study of its biologic properties, concerning which I will not go into details here It is true that the bacillus tuberculosis retains its infective capacity for one-hundred and eighty six days, even if kept under unfavorable conditions Sputum containing tubercle bacilli was dried and kept for this length of time, and animals were then infected by it When we consider this, we will understand how very much we are exposed to infection The bacillus tuberculosis is 1 5 to 3 5 μ long, slender in comparison with its length, and slightly bent When Koch published his work, he had found the bacillus under the following conditions in 19 cases of miliary tuberculosis, in 29 cases of tuberculosis of the lung (here especially in the sputum), in fresh cheesy infiltrations and in cavities, the walls of which were breaking down , in tubercular ulcers of the tongue , in tuberculosis of the pelvis of the kidney, the uterus, the testicle ; in 21 cases of scrofulous glands , in 13 cases of tuberculosis of the joints , in 10 cases of tubercular affections of the bones , in 4 cases of lupus , in 17 cases of tuberculosis of cows , in 273 cases of tuberculosis of guinea pigs , 105 rabbits , 44 field mice , 28 white mice , 19 rats , 13 cats, and in a number of tubercular dogs *hamsters*, pigeons, chickens and other animals

The existence of the tubercle bacillus being now established, we must next ask, What are its modes of life? Where do we find it outside of the animal body, and how does it reach human beings?

II —MODES OF INFECTION

I will select a few typical cases to demonstrate the different modes of infection

Case 1 —*Tuberculosis by Inhalation* Two girls, say from 15 to 30 years of age, enter a room in which a consumptive is staying One of these girls belongs to a family in which consumption is hereditary Her father, or mother, or grandfather, or grandmother died of tuberculosis She is pale, tall and slender , her chest is flat, and her ribs are not very elastic, but rather rigid, as shown by her shallow breathing , she has a little cough due to a bronchitis which comes and goes The other girl is of a healthy appearance, and consumption can not be traced in her family The patient coughs and expectorates into a cuspidor, the upper margins of which are slightly soiled with the sputum , some of the sputum even falls on the floor or carpet, from which after becoming perfectly dry, it is stirred into the air by an air current and is inhaled by both visitors The dust containing the tubercular poison is drawn into the larynges and into the bronchial tubes of both individuals The healthy girl with great excursions of the walls of the chest and a strong expectorant power will soon, that is to say, in the *course of a few hours, expectorate the foreign substances*, while they will remain in the air passages of the other girl They now mix with the bronchial exudate, and as the tubercular organisms find in this conditions suitable for life—moisture, temperature, and nutritive material—they grow and multiply In number they multiply to thousands and are constantly moved up and down with the mucus in the bronchial tubes Though some of the mucus and some of the bacilli are expectorated, thousands remain and continue to multiply The upward and downward movements of the mucous column, laden with bacilli, cause friction against the bronchial mucous membrane, producing defects of the protecting epithelial layer, especially at points in the smaller portions of the bronchial tree, where its branches bifurcate at more or less right angles (Rindfleisch) This unprotected portion will be the point of entrance for some bacilli, they are rubbed into the deeper tissues of the bronchial mucous membrane, and once seated there, they bring about the formative action on the surrounding cells natural to them (Baumgarten), leading to a multiplication of those cells, which finds its visible expression in the grayish, dewdrop-like *miliary tubercle* (Bayle) or in a more diffuse production of cells, *the tubercular granulation* , or in a filling out of air cells with this newly formed cellular material,—*cheesy pneumonia* Whether the product be a miliary tubercle, or a tubercular granulation or pneumonia, they all have this in common , they all contain numerous tubercle bacilli as long as they are fresh , they soon show a lack of nutrition , they soon show a dying of the cells, a necrosis which presents the appearance of dry Swiss cheese, therefore called cheesy degeneration, and at this stage they show no more, or but very few, tubercle bacilli These cheesy, degenerated portions gradually take up serum again, becoming moist and soft This soft cheesy substance, representing a decayed part of the affected lung, again shows incalculable numbers of tubercle bacilli It is partly expectorated, thus furnishing the source of numerous infections in the outer world, and leaving a cavity behind These cavities may be the size of a pin's head or may occupy a whole lung I said before, a part of the cheesy material is expectorated , another part gets into the adjoining branches of the bronchial tree and causes the same changes mentioned above , while some may reach the principal bronchus of the other lung which is thus far not diseased, and infect this also Again, another part may reach the larynx, the epiglottis, etc , and cause a tubercular laryngitis , while again other portions may reach the mouth, but instead of being expectorated, be swallowed, thus causing an intestinal tuberculosis The lips of such patients will naturally very often be covered with many tubercle bacilli and if they kiss any one the tuberculosis may thus be transferred One of the localizations in the lung may break into a vein, causing a dissemination of the tubercular virus throughout the whole body, thus producing a general miliary tuberculosis

The case above described would represent a typical case of tuberculosis caused by inhalation It is understood that the anatomic changes of the lungs, the bronchial tree and the larynx are accompanied by the common clinical symptoms , fever, emaciation, shortness of breath, cough, pleuritic pains, etc Instead of a female, a male might be infected , instead *of the stated age, the patient might be at any age*, although those between 15 and 30 *years are most* frequently affected The descendant of a healthy family, too, may become infected but this is exceptional

Case 2 —*Food tuberculosis caused by swallowing tubercle bacilli* The drinking of milk from a tubercular cow and the eating of diseased parts of meat not infrequently cause intestinal tuberculosis I have made the post-mortems of quite a number of cases of purely intestinal tuberculosis, milk having been regarded as the carrier of infection Tuberculosis of the intestinal tract may also result from the virus being transferred in kissing If we shake hands with a consumptive who has just wiped his mouth with his hands, or handled his handkerchief, our hands may be covered with tubercle bacilli which may easily enter our mouths and produce the same effects as above described It is true that in many cases the acid of the gastric juice may destroy the tubercle bacilli, but the acid is not always present, and so they may pass through the stomach and enter the jejunum and ileum to do harm there

Case 3 —*Tuberculosis by inoculation* A nurse or other person cleans a vessel containing the infected sputum of a consumptive The skin is cracked or a cut is inflicted during the cleaning, and some of the sputum is thus introduced into the blood current General miliary tuberculosis may develop very rapidly I have seen this occur

Case 4 —*Hereditary tuberculosis* This mode of infection has not been cleared up as yet We know that cows give birth to calves afflicted with tuberculosis, while human beings, it seems, are generally not born infected by a perfect tuberculosis, but rather with a predisposition to it This predisposition is generally called scrofulosis, and we will see later that this condition is of the greatest importance, the more so, as it is very much neglected It is also possible but this has not yet been proven, that a direct infection of the fetus by the sperma of the father or the ovum of the mother may take place In such a case, generally local infection and infection of the regional glands exists

III —MEASURES INTENDED TO ARREST THE SPREAD OF TUBERCULOSIS WHAT MEASURES ARE NECESSARY?

1 Early diagnosis of the disease by a physician There should be medical centers in all parts of cities where poor people who are suspected of having tuberculosis may be examined free of charge, and in case the examination should reveal tuberculosis, their relatives should be informed of the nature of the disease, and printed directions given them, enumerating the precautions which are necessary to prevent the disease from spreading The people in general should be advised to consult a physician as early as possible when tuberculosis threatens Early diagnosis is very important, as cases in the first stages give the most recoveries, and the sooner a case of tuberculosis is discovered, the sooner protective measures can be introduced

2 Disinfectants should be given to the needy, free of charge, covered porcelain vessels as sputum receptacles, and covered vessels into which the handkerchiefs, underwear, bed clothes, etc, may be deposited and boiled, should be furnished at the lowest possible cost

3 The patient should be instructed to deposit his expectorations very carefully in the above-mentioned covered porcelain vessels, which should contain some 2 per cent solution of carbolic acid or only water All cuspidors in the rooms occupied by the patient should contain a disinfectant or water, preventing the drying of the infectious material

4 The handkerchiefs of the patient should be well cared for Not less than two should be used daily, and when a new one is taken the one used should at once be put into a covered vessel and boiling water should be poured on it Every night all the wash collected should be boiled for half an hour

5 The body and bed wash of the patient should not come in contact with that of other members of the family until after it has been boiled or better yet, not at all

6 The patient should sponge his whole body at least twice a week, and should direct especial care to the cleaning of his face and hands He should also keep his finger nails cut very short and well cleaned, as the spaces under the nails are gathering places for tubercle bacilli

7 The patient should not kiss anybody

8 Teeth and mouth should be kept clean

9 The patient should sleep alone in a room This room should be well-aired all day It should have no carpet, and the floor should be washed every day

19 The patient should not attend large gatherings except in the open air He should not visit theaters, concerts or restaurants

11 The patient should be very careful not to expectorate on the street, on the floor of street-cars, etc

12 The patient should not shake hands with other people

13 In all places where drinks of any kind are sold, glasses should be cleaned in running water, and should not be dipped by the dozen or more into the same contaminated water Dishes, knives, forks, spoons, etc, in hotels and restaurants should be well cleaned

14 Streets should be well cleaned, and on dry days should be well sprinkled

15 The sidewalks should be of stone or cement, and should not be excepted from the cleaning and sprinkling process as most consumptives expectorate on the sidewalks rather than in the middle of the street Dry and windy days give the most chances for infection, and on such days the sprinkling should be very thorough

16 Ladies should not wear trailing dresses, which will come in contact with the ground and thus gather a great amount of infectious material, which, carried home, may become a source of infection to their family

17 All milk consumed in hotels, restaurants and private houses should be boiled Tubercular patients on milk farms and in all places where milk is sold, should not stay in the rooms where the milk is kept, nor should they have anything to do with the milk or its products, as milk is the best medium of infection

18 Hospitals should be erected near or in the cities for the sole accommodation of consumptives, for the following reasons

(*a*) If consumptives are kept in general hospitals, they constantly endanger the other patients, as patients whose constitutions have been weakened by disease or operations are more liable to infection than others

(*b*) In these special hospitals the patients can be taught the necessary degree of cleanliness and the necessary precautions for disinfecting themselves, their sputa, etc, so as to protect others Two weeks in the hospital will generally be sufficient for this

(*c*) Consumptives suffering from intercurrent diseases should be accepted at all times and retained until they have recovered from the attack

(*d*) Patients in the last stages should also be accepted by these hospitals, but should be kept entirely isolated from the others

(*e*) On leaving the hospital, the patients should be induced to promise to keep up the care learned very conscientiously, and if poor, they should be supplied with a quart of milk daily for their own use, free of charge

Gentlemen, this is a long list of rules, and considering the indolence of people in reference to such matters, we can hardly hope that they will all be carried out at any time, although we can promise that "time and money spent in this cause will prove an excellent investment"

We physicians, knowing the biologic properties of the tubercle bacillus, knowing that it can not propagate outside of the animal body on account of its delicate sensitiveness to change of temperature, we know that a perfect disinfection of all products of tuberculosis of man or beast, would in time mean a complete extermination of tuberculosis, and therefore we are not afraid of such a long list of rules as the above Every one of the measures proposed will bring about a certain result, and what one or a few of them alone can do, is shown by Prussian statistics, as published by Prof G Cornet *Berliner Klinische Wochenschrift*, No 20, 1895) The President of Police von Richthofen and the Minister von Gossler of Berlin, after hearing the propositions made in regard to prophylaxis of tuberculosis by a medical board issued orders to carry out those measures in the prisons, penitentiaries, and insane asylums of Prussia with the following result while in the years of 1875 to 1887, 31 persons out of 10,000 died of tuberculosis, beginning from the year of 1887 a gradually decreasing mortality was observed, down to 25 out of 10,000 in the year 1893, which means that from 1887 to 1893, 70,000 persons died of tuberculosis in Prussia, less than was to be expected at the former death rate A similar decrease was observed at Hamburg where physicians headed by Predohl constantly urged the introduction of prophylactic measures, while in Bavaria where those measures were opposed by Bollinger the death rate remained the same until 1892 Although these figures are so very encouraging, one's thoughts must not only wander in this direction We must not forget scrofulosis and chlorosis, possessing as they do the so-called predisposition to tuberculosis, a predisposition which is partly of a mechanical, partly of a histologic, or a chemic nature (diabetes) I have seen so much neglect of scrofulosis and chlorosis and so much misunderstanding, that I would like to call special attention to the principal facts concerning them

IV —SCROFULOSIS

Scrofulosis is generally an hereditary condition, which children inherit from parents who were diseased with tuberculosis, scrofulosis or syphilis Scrofulosis may also be acquired during childhood by living in badly ventilated rooms, to which sunlight, the great oxydizer, disinfectant and purifier, has no access, life in dark and moist basements, over-nutrition, too much bread, potatoes, and other starchy foods, and insufficient cleanliness of the body—all may lead to scrofulosis The skin and the mucous membranes in these cases are in an exceedingly vulnerable condition, and the regional lymphatic glands are unduly affected by any abnormal state of the organs which they drain Once affected, the inflammation of the glands early assumes a chronic character and their products of inflammation have a tendency to undergo cheesy degeneration A superfluous amount of lymphatic vessels and an abnormally rich absorption from all parts of the body is also to be found We are in the habit of differentiating between a torpid scrofulosis and an erethic scrofulosis and this differentiation is not only of theoretical importance Children with the torpid form of scrofulosis have thick lips, the upper one is turned upward, the entrance to the nasal cavities generally show a yellowish secretion of the nasal mucous membrane and the breath has an offensive odor A conjunctivitis gives a red margin to the eye, the cheeks are red, glossy and puffed up, swollen glands of the neck can be felt, or we see scars indicating the seat of past glandular affections

The erethic form of scrofulosis shows us children of a gracile, slender build, a pale almost transparent skin haggard cheeks, small hard glands around the neck and in other portions of the body This form is more easily overlooked than the other These children are considered tender but not sick, and so their parents see no reason for consulting a physician Only too late do they find out their mistake The anemia from which these children suffer (I have already mentioned that they are pale) furnishes a blood for the growing organs which is insufficient in quality and quantity, and this will be the cause for an insufficient development of the different organs, they will remain small and will not be able to functionate nearly as well as other normal organs would But even if, for instance, the liver and kidneys, though small and not of perfect anatomic structure, may functionate quite satisfactorily for many years, certain other organs can not I refer to the heart and the aorta, especially the latter If the aorta is too small—and these patients at the age of about 20 or 25 actually have an aorta the size of a child's—it means that the main channel which conducts the blood supply from the heart to the organs and peripheral portions of the body is insufficient, and there must be and always will be a lack of blood for nutritive and functional purposes in all parts of the body, an irreparable condition which can only lead to the worst results It is now too late! Even transfusion of blood will be of no avail, as there is no room for an additional quantity of blood in these small channels

V —TREATMENT OF SCROFULOSIS

Sunlight, exercise in the open air, well ventilated rooms, if possible on the seacoast or in wooded portions of the country, bodily cleanliness, proper food in measured quantities, codliver oil in winter and iron especially in the erethic forms, are the important factors which bring excellent results We physicians can not cure scrofulosis without the aid of intelligent, conscientious and untiring mothers Children who have not such mothers can only be successfully treated in sanitariums If I am called to a scrofulous child, my recommendations will be as follows

1 Seacoast or country for at least three months a year A shorter stay will not bring any lasting effects (For poor patients sanitariums are to be provided for by municipal and state governments) All the outdoor exercise possible

2 Warm salt water baths lasting for ten minutes morning and night At home these baths may be prepared in the following way

(*a*) Five pounds of seasalt, or if the people are poor, of rocksalt are dissolved in a wooden or porcelain lined bath tub full of warm water

(*b*) This same bath is used altogether six times, but after the first bath a bucketfull of water is taken out each time, and in its place a bucketfull of boiling hot water with one pound of salt is added

(*c*) The bath temperature should be about 98 F Every fourth day a new bath must be prepared

3 During the cool part of the year I would give pure cod liver oil and at other times syrup of iodid of iron

4 If called to either poor, inattentive or negligent people, I would in regard to diet only recommend meat, eggs, milk, some vegetables, but very little potatoes, bread and carbohydrates in general, while in other cases I use the following diet which is employed at the great Hospital at Bercksur-Mer and which has also given me very good results

Breakfast —		
Milk soup	6 times a week,	7 ounces
Milk chocolate	1 time a week,	7 ounces
Dinner —		
Soup	5 times a week	8 ounces
Fat vegetables	2 times a week	8 ounces
Roast meat	6 times a week,	4 ounces
Fried eggs	1 time a week,	1½ eggs
Fresh vegetables	8 times a week	
Dry vegetables	3 times a week	
Prunes	1 time a week	
Afternoon —		
Cheese	2 times a week,	1⅓ ounces
Butter	2 times a week,	⅔ ounces
Sweet pastry	1 time a week,	
Fruit	1 time a week,	2⅔ ounces
Supper —		
Soup	irregular,	8 ounces
Meat (boiled)	4 times a week,	5⅓ ounces
Fish	2 times a week,	5⅓ ounces
Roast meat	1 time a week,	5⅓ ounces
Fresh vegetables	2 times a week,	5⅓ ounces
Potatoes	3 times a week,	5⅓ ounces
Milk and rice	2 times a week,	⅔ ounces

In the torpid forms of scrofulosis the daily amounts of liquid taken should be reduced to two pints, all in all while in the erethic forms the patient should continue to take his usual amount and add from four to six quarts of boiled milk daily, this milk may be diluted with water at equal parts As a matter of course, the frequent catarrhal conditions of the mucous membranes, the affections of the ear, bones and joints, etc , have to be attended to very promptly and perseveringly Concerning the *important treatment* of the small heart and the small aorta, I refer to the treatment of chlorosis in the following chapter

As soon as a lasting rise of temperature sets in, indicating a commencing tuberculosis, I *give my* patients, if they are adults, a No 1 gelatin capsule filled with oil of cloves every two hours, or even every hour from 7 A.M. to 10 P.M.

VI.—CHLOROSIS.

A condition which mainly presents a lessening of the hemoglobin of the blood is called chlorosis. It seems that under conditions so far unknown to us, the iron contained in our food forms a combination with the sulphur compounds in our intestinal channel and thus becomes unabsorbable. The blood becomes pale and watery, the mucous membranes and the skin grow pale and all the well-known symptoms of chlorosis set in. It is hard to understand why people allow the process to advance as far as they do without calling for medical aid, but the fact remains that they see the patient become almost bloodless before they think it their duty to consult a physician. I think if we had an English name for the disease, like the Germans have, "Bleichsucht," that would help matters materially. "Green sickness," I believe is the only term used in this country and I think it to be very proper, but it should be used more, so that more people might become acquainted with it.

VII.—TREATMENT OF CHLOROSIS.

A small heart and a small aorta are often found in chlorotic individuals, especially in cases of chlorosis, complicated with erethic scrofulosis, while in simple chlorosis we oftener find a large heart, and to this I wanted to call your attention particularly for two reasons: 1, small heart and a small aorta give a disposition for tuberculosis and cause constant weakness, constant ailings and early senile changes in all organs; 2, *we can increase the capacity of the heart and the aorta.* Many hundreds of post-mortems on beer drinkers—I mean people who daily drank large quantities of beer, have proved to me that they understand the technique of dilating the aorta and the heart. If they can do this in themselves we can reach the same result in our patients. It is simply the constant increase of pressure in the arterial system caused by the presence of large amounts of liquids consumed that increases the caliber of the aorta and not the alcohol. It is a kind of *internal massage,* and we can do the same with milk, which is harmless and nourishing besides, or with other liquids. Believe me, when I tell you, that with perseverance you will succeed in by far the majority of cases, and you will not only prevent tuberculosis, but your patients will grow much stouter and their ailments which threatened to make life miserable to them will cease.

If we have a case of chlorosis before us, which yields to an energetic iron treatment only in an imperfect or transitory manner, or which shows an imperfect development of the body in comparison to the age, then we may well conclude that the above mentioned condition exists, and act accordingly. It is better to be guided by those marks, than by the percussion figure of the heart, although the latter will often give the clue for our opinion, but only, if we know well the outlines of the normal heart at different ages and if we are well acquainted with linear percussion. There are quite a number of cases of chlorosis with a general obesity and a large heart existing at the same time; in such cases a reduction of liquids rather should precede or go hand in hand with the iron treatment. We must individualize. But I may say that *every case of erethic scrofulosis calls for internal massage of heart and aorta.* This treatment should be introduced in the following way:

I first tell my patients to continue their usual mode of living for two more days, measure *all* the liquids they take and report the whole quantity taken after two days. Half of the quantity used, I consider the average daily amount and then I order one more quart of liquid to be taken each day until the highest limit will have been reached. Different patients range between three and nine quarts daily, while most of them will take from five to six quarts; this means in addition to the quantity they used to take before treatment began. They can take pure boiled milk, or, if this occasions inconvenience, milk and water (boiled) half and half, or the liquid can be made up of beer or any other liquid which they may prefer. Thus we will cause a constant increase of pressure which will gradually but surely—with but few exceptions—cause an increase of weight that in my cases has varied between three and thirty-five pounds within four months, and we will then be able to get a full and lasting result from our iron treatment where we were unable to get it before.

In reference to the medical treatment of chlorosis, I would like to call your attention to the fact, that most practitioners use the iron in too small quantities. I have had a great number of chlorotic patients who had been under treatment with Blaud's pills, three or four a day having been ordered for them with but very little good results. I gave them sixteen three-grain Blaud's pills in the form of Fraser's tablets, four after each meal and four at bed time, ordered them to eat three eggs a day, drink four quarts of milk daily and as much beef juice as possible, and they made a speedy and complete recovery. If I can have it, I give ferratin at meal times beside. After about a week the patients begin to feel life and elasticity returning, and in the course of from six to eight weeks they will have gained considerable color. I advise you to keep those patients under your charge and control until they are perfectly well, as an incomplete recovery will often be followed by bad relapses which can be prevented. The patients are too apt to consider their rosy cheeks a sign of complete health. Only the physician must decide. Has everything been neglected and has an infection with the tubercular virus taken place? Then we are called upon to cure.

VIII.—TREATMENT OF TUBERCULOSIS.

You certainly do not expect me to bring a compilation of everything of value in the treatment of tuberculosis, but I will say that by mentioning no other methods but my own, I do not ignore the others or undervalue them. On the contrary, I believe that different methods lead to good results. Nowadays it almost requires an excuse if we introduce a new remedy for an infectious disease and it is not a serum of some kind, but I shall not offer an excuse as long as mercury cures syphilis. I heartily wish that an antitoxin to the tubercular virus may be found that will reduce the mortality from this disease as the diphtheria antitoxin has done in diphtheria, but while we are waiting for that to come we must not let our patients die, believing that only serum can help. With the different methods employed, so far, and with better hygienic conditions, we already have 24 per cent. of recoveries and we can increase this number, if the people will hear our loud and persistent call "Come early" We know that the curability of tuberculosis has its limits, and that a man whose consumption is by accident cured in the third stage would in most cases be a cripple, that means, he will suffer shortness of breath and chronic bronchitis and never regain perfect health The first and second stages give chances for recovery and after such guarantee comparative health Pleuritic thickenings and adhesions will remain, fibrous changes in the parenchyma of the lungs also, and consequently the dullness which they cause The bronchitis in older cases will also remain, but if there is no temperature for months, if the patient gains flesh and color, if there is no progression of the local changes and if there are no tubercle bacilli, after repeated examination, to be found in the sputum, then we can speak of a recovery just as we do in syphilis

Now, I will make you acquainted with my own method of treatment which, while by no means a panacea, will, I hope, gain your favor in active service if your expectations are reasonable and your endeavors persevering

Basing on Robert Koch's finding (*Mittheilungen aus dem Kaiserlichen Reichsgesundheitsamte Ætiologie der Tuberculose*) that oil of cloves 1 to 300,000 prevents the growth of tubercle bacilli, I have recommended its use for the last eight years, have employed it in my practice for the last five years and a half and have found that this, in reference to tubercle bacilli, a very powerful antiseptic, can be introduced into the human body in quantities which will bring about concentrations of disinfecting strength for a year and a half at a stretch without doing any harm—without, for instance, causing albuminuria I have injected it hypodermically for many weeks at a time and when the injections were made properly, have seen no ill effects I have employed the treatment in 243 cases in the course of five years and a half, and all those in the first stage seem to have permanently recovered I have yet the tubercle bacilli specimen on hand from patients who have not shown any symptoms of tuberculosis for the last three or four years, but who to all appearances are perfectly healthy I have also had some recoveries in the second, and also two in the third stage, but while the second stage sometimes responds well, the time has been comparatively too short for the forming of a far-reaching opinion I have employed this treatment in the following way

1 A No 1 gelatin capsule is filled with the best pure oil of cloves (Merck), and taken with a glass of milk every two hours from 8 A M to 10 P M

2 If the oil of cloves is tolerated, one capsule should be given every hour, if necessary for a year and a half or two years

3 Oil of cloves (Merck) and cold pressed olive oil are mixed in equal parts They are kept standing in a warm place and a hypodermic syringe full is injected into the subcutaneous tissues, first once, then twice a day, but at the same time These injections are continued as long as the patient will stand them for about four weeks Then comes a pause of two weeks, injections for two weeks and so on My patients all have their own syringes with an asbestos packing I first draw the syringe full of absolute alcohol (Squibbs), squirt this on the skin of the back and then inject in two places In one patient I have had an extensive necrosis of the skin following injection, caused by the patient bending over while I was injecting which caused the needle to slip somewhat, and the injection entering the layers of the skin I have seen a number of necroses in one other case, but I did not make the injections If you inject into the subcutaneous tissues where the needle is movable, such things will not happen I sometimes make my injections in the supraclavicular regions but here they can not be made very often, and an extensive, but not very marked edema reaching down to the third rib often follows them

I have also used a clove water in cases of exudative pleurisy which I thought to be of tubercular origin In such cases I aspirate with a Dieulafoix, and then wash out the pleural cavity with a three fourths of 1 per cent mixture of oil of cloves and water, which is prepared in the following way water is boiled for two hours, then mixed with three fourths of 1 per cent of oil of cloves, the mixture is filtered at a temperature of 100 F into a bottle which has been thoroughly cleaned and washed with some of the water that has been boiled for two hours The filtrate should be clear at a temperature of 97° F to 100° F Now, for instance, if I should draw out three pints of pus, I would wash out as well as I could with the filtered clove water, and at last infuse two pints (two-thirds of the volume aspirated) and leave them in the pleural cavity, closing up the needle wound I have treated fourteen cases in this way, four children and ten adults The character of the exudate was seropurulent twice, and purulent twelve times In one child, resection of a rib had to follow the washing, and one patient died of tuberculosis of the lungs soon after This last patient left town and the actual success of the washing is not known Twelve patients made rather speedy and perfect recoveries

As the anti bacterial properties of the oil of cloves are so great, and as it can be brought into the system in such large quantities without doing harm, I consider the cloves superior to creasote, but see no reason why it should not be given together with creasote The combined use of both I would strongly recommend

Venetian Building

FURTHER OBSERVATIONS ON SUBMUCOUS INJECTIONS OF CREASOTE IN THE TREATMENT OF LARYNGEAL TUBERCULOSIS

Read in the Section on Laryngology and Otology, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md May 7 10 1895

BY WALTER F CHAPPELL M D, M R C S, Eng
SURGEON TO THE MANHATTAN EYE EAR AND THROAT HOSPITAL, NEW YORK

The employment of remedies by the method of sub mucous injection has been resorted to in but few affections This is probably due to the fact that internal medication and topical applications meet most of the indications for medicinal treatment, The pathology of the initial lesion of tubercular disease in mucous membranes is, however, exceptional Beginning first in the mucosæ, immediately beneath the epithelial layer of cells, the deposits are so effectually protected that, unless ulceration takes place, local applications are of little benefit In these affections it would therefore seem that measures should be employed that would admit of direct contact between the remedy and the diseased tissues

To effect this, either surgical measures or submucous injections must be employed By the latter method, lactic acid, menthol, iodoform and boric acid have been given Some observers have favorably considered lactic acid and menthol, but the other remedies have given only indifferent success Krause says he was led to use lactic acid from its well known property of acting only on diseased tissues and leaving healthy tissue undisturbed He began his injections with a 10 per cent solution of lactic acid, which was gradually increased in strength to 80 per cent There was little pain or reaction until the 50 per cent solution was reached His results from this treatment were fairly good, ,subjective symptoms disappeared, ulcerations healed and infiltrations diminished to a more or less degree Hering, Major, Gleitsmann, McSherry, Rosenberg, and some others have recorded their experience with injections as being on the whole favorable The writer has also employed lactic acid submucously with some success, but all of his injections with this remedy even in 10 per cent solutions caused some pain and soreness, despite the favorable reports of the treatment by submucous injections, some writers assert that they have had nothing but failures from it, so that, on the whole, this form of treatment has not been received with much enthusiasm

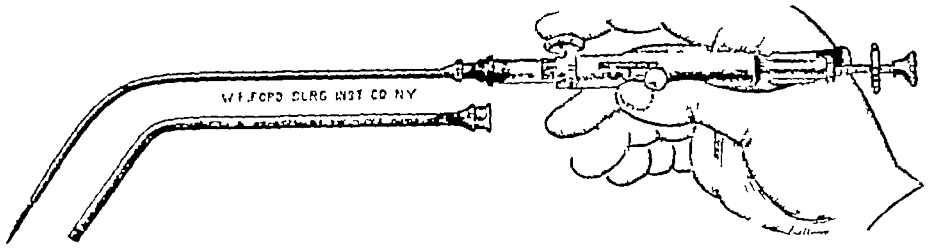
This I think is partly due to the inaccurate and imperfect means which have been used to make the injections The laryngeal syringe of Hering and several others I have seen, consist practically of a long needle with a laryngeal curve, attached to a syringe barrel and piston With this syringe it is impossible to accurately gauge the depth of the injection, and when using a syringe of this kind, I have found it necessary to push the needle deep into the tissues, otherwise the movement of pushing down the piston and the unsteady condition of the surrounding muscular structures were sure to disengage the point of the needle As the tubercular infiltrations are very superficial, it is probable that some of the failures are also the result either of the injections being too deep, or of the fluid welling up around the needle and escaping

The automatic syringe and guarded needle point described in my article on the submucous injections of creasote, in the New York *Medical Journal* March 30, 1895, obviates these difficulties to a great degree. In several instances where there seemed to be no result after an injection, I found that either the needle had slipped or the fluid escaped around it

The point of the needle should always be moderately sharp, and owing to the action of the creosote or lactic acid, the rubber guard should be renewed frequently, otherwise it becomes soft and slips up on the needle when pressure is made The syringe should be held by the operator in as favorable a position as possible, so as to make the injections with ease Separately these directions may appear unimportant, but if faithfully carried out they do much to turn failure into success

Creasote has many qualities which seem to recom mend it for submucous injections It is neutral in reaction, and when applied locally it resembles carbolic acid in causing considerable local anesthesia, it is also antiseptic, sedative and astringent There is much difference of opinion about its effect on the tubercle bacillus According to experiments and observations of some writers there is much evidence to show that creasote has a decided anti-bacillary action The writer inclines to the theory that creasote neutralizes the poisonous products of bacillary origin which are said to produce the fever and digestive troubles of tubercular patients and, that if it does not really kill the bacilli, it practically renders them innocuous, the greatest difficulty being to supply creasote in such a manner and in sufficient quantity to reach all the bacilli

The oily solutions of creasote, in the proportions already published by me, give the highest percentage of favorable results when given by the submucous method, some cases do better when the hydrocarbon oil is left out The omission of the oil renders the solution stronger and of greater consistency Other patients improve more rapidly from the injections of alcoholic solutions of creasote, beginning with a 20 per cent solution and gradually increasing until 50 per cent is reached These solutions cause some burning and irritation In a few instances pure creasote has been employed, but in my experience, it should be reserved for cases where there is considerable and rapidly progressing tissue necrosis In m first injection I rarely used more than one drop o any of the solutions for each injection, subsequen experiments show that two, three or more drops o the oily solutions may be used with advantage ove the arytenoid cartilages and ventricular bands o some patients



The benefits obtained from this method of treatment vary in different patients In some the dysphagia, dysphonia and other subjective symptom have entirely subsided and the disease has seemingl been arrested for several months without much chang in the hypertrophies and infiltrations In other again, the infiltrations have diminished to a poin where further treatment seemed unavailing until change of climate increased the general nutrition an favored further resolution There is still another clas of cases in which the tubercular process may be ar rested in all but one portion of the larynx Thi was well illustrated in one of my patients, who gav a conclusive history of syphilis, and on first examination his laryngeal trouble was thought to be specifi A thorough course of antisyphilitic treatment increased the laryngeal affection Further examination proved the case to be tubercular Under the cre sote treatment the disease was arrested in the cor and in one of the arytenoids The other arytenoi although persistently injected, did not diminish mo than one-third of its former size The mixed trea ment for syphilis was then begun and within a week the delinquent arytenoid was reduced to nearly normal proportions

When tubercular disease infiltrates the perichondrium of the arytenoids, the prognosis is not favorable and it is doubtful if the cartilages ever resume their normal size and appearance under any treatment

Prompt response to treatment can not be expected in a disease so intractable as tubercular laryngitis Many failures to obtain some benefit are, however, in part due to the hopeless spirit with which some physicians undertake its treatment

Physicians who have been more or less successful in the treatment of laryngeal tuberculosis by various methods, will agree that it was obtained only by the systematic and persistent use of the selected methods

While the writer does not wish to be understood to think that creasote is the only drug to be used in tuberculosis of the larynx, he does assert that when the submucous treatment is decided upon, that it should be given by the automatic syringe already mentioned, no matter what remedy is used The exact depth and amount of the injection can then be regulated and the field of injection always kept in view in the laryngeal mirror Usually, the submucous injections have been reserved for infiltrated and hypertrophied tissues and not for the ulcerative stages The ability to give a superficial or deep injection, according to the requirements of the case, has added greatly to the degree of usefulness of the submucous method A resumé of the claims for submucous injections of creasote are

1 In the early stage of the disease when there is only slight thickening of the tissues as a result of the tubercular deposits, the method as described by the writer brings the creasote in direct contact with the deposits Further progress is frequently arrested, and the infiltrations subside

2 When the stage of ulceration is reached, and the ulcers are comparatively deep, with some surrounding infection, injections into the surface of and around the ulcer, assist granulation and arrest further invasion of tissue

3 When the affected tissues are rapidly necrosing, the patient is usually too weak to undergo curetting or excision The injection of creasote is then very beneficial, relieving the pain and laryngeal soreness, hastening the separation of necrosing tissue and arresting the progress of the ulcerations

DISCUSSION

Dr Casselberry—The laryngeal syringe which the author has exhibited is ingenious and seems well adapted to the purpose In delicate intralaryngeal injections it certainly is an object to be able to avoid the slight deviating motion which is imparted to the hand by driving a piston home The spring catch of the syringe might, however, be made to work more smoothly and perfectly

Dr H W Loeb, St Louis, called attention to the possibility of accomplishing good by submucous injection of immunized horse serum Dr Paquin, of St Louis, was quite successful in the use of the serum in pulmonary tuberculosis, and while the speaker had seen a case of laryngeal tuberculosis improve under subcutaneous injections distant from the larynx, he thought that submucous injections would be more successful

Dr Chappell—I regret I can not agree with Dr Gleitsmann when he says it is an easy matter to regulate the depth of a submucous injection in the larynx with an ordinary laryngeal syringe and needle I realize the success of submucous injections depends in having a guarded needle The spiral spring in the barrel of the syringe has to be very strong

A COMBINED UTERINE IRRIGATOR AND DRAINAGE TUBE, WITH INDICATIONS FOR ITS USE

Read before the Loup Valley District Medical Society at St Paul Neb, March 12, 1895

BY O GROTHAN, M D

ST PAUL, NEB

The need of uterine drainage as based upon modern surgical principles is or ought to be so well understood that anything said in this direction may seem as though treading on already well beaten grounds Yet the importance of the subject will bear repeating, even though we have good reason to expect these indications to become fewer and fewer, as time goes on, hand in hand with aseptic obstetrics and gynecology Still there is one thing certain that until we may live in a Utopia of a sterilized medical profession and absolute cleanly patients, the dirty doctor (I mean surgically dirty) and ignorant midwife will always be with us, and leave infection along their wake Beside, an infected womb of ten or fifteen years ago, may at any time, cost our patient the price of her life, irrespective of the law of established tolerance The indication for uterine drainage and irrigation may be considered under the heading of puerperal and non puerperal To the latter a rather wide range of usefulness may be extended, viz

1 After the removal per vaginam of uterine fibroids

2 As Manton[1] has stated after some cases of trachelorrhaphy

3 After the Apostoli treatment

4 According to Murray and Polk, curettement and drainage for pyosalpinx

5 In chronic gonorrheal endometritis, especially where there is narrowing of the cervical canal

6 In subinvolution as the result of septic endometritis and in hemorrhagic and catarrhal endometritis

7 In dysmenorrhea of congestive origin or due to stenosis

8 The septic variety of endometritis accompanied by hypertrophy with excessive glandular secretion, inertia and atony of the uterine muscles, the benefit of drainage and stimulating or antiseptic irrigation is striking The last named condition often calls for curettement, iodoform gauze tamponage and finally the use of proper drainage

9 In sterility, due to stenosis, either congenital or acquired

10 It will answer the purpose of a stem pessary, if such an instrument has ever a legitimate indication

But where the most good may be accomplished is in puerperal sepsis Here the endo-uterine douche alone, as a rule, without free drainage is inadequate Let me state right here that when the lying in patient is infected, nine times out of ten the accoucheur is responsible, but these things may and will occur we all know, and that, from circumstances over which we have no control, as, for instance, where midwives have preceded us, and gross uncleanliness on part of the patient or attendants, both before and after parturition Also from the rekindling of an old infection—the so called auto-infection We should also remember that there are contra-indications for placing a foreign body within the uterine cavity Chief among these are acute inflammations of high grade, whether metritis, endometritis or parametritis, and we must be morally certain that pregnancy does not exist The indications for uterine irrigation and drainage are not difficult to determine, as every text-book and journal treating of the subject recommends irrigation and efficient drainage, so that the question confronting most of us is not *when*, but *how*, to employ this measure, the solution of which is left entirely to our own resources

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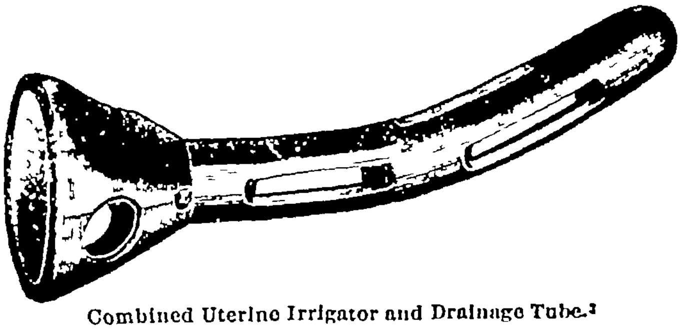
[1] Annals of Gynecology, July 1895

Should I now ask you, what are the best means at our disposal for securing uterine drainage, if I mistake not, your answer would unanimously be, iodoform gauze This substance is the material *par excellence* to carry off primary wound secretion, as well as a valuable tissue stimulant and drain in tubercular or other fistulous tracts, and almost an indispensable mechanical hemostatic and uterine stimulant after curettement, but as stated by competent observers, instead of acting as drainage in the uterine cavity, it is simply expelled or acts as an obstructing plug to the discharges

Next Walter S Wells' spiral wire tube, filled with wicking and supposed to establish osmosis between the uterine cavity and a medicated sponge placed in the vagina, has proved to be a failure

Then comes Cherron[2] with 20 to 100 strands of silkworm gut introduced on a special holder, the free ends of the gut being fitted to a celluloid plate This may in a few cases prove of some value as a capillary drain



Combined Uterine Irrigator and Drainage Tube.[3]

We have Bolt's and Wylie's hard rubber drainage tubes, to both of which the same objections are found applicable In gynecology these tubes answer better than in puerperal sepsis, but in either case they fall short of our expectations, first, on account of the grooves being partially closed by the tissues pressing into them, second, and the most serious objection to their use, is occlusion by the vagina falling against the free outlets

In a recent case of puerperal sepsis, where one of these tubes had been placed in the uterus for twenty-four hours, its withdrawal and the simple introduction of an English catheter was followed by the discharge of more than an ounce of exceedingly foul sanguino purulent fluid, Of the two, on account of its freer outlet, Wylie's tube is preferable, but who would think of using a contrivance of this kind for drainage in a surgical wound?

I will here show you a Manton tube which is the best of any on the market, as you will observe it has a truncated extremity and a slot nearly its whole length, but it has the same objectionable outlet as the two last named—hence is of but little practical value

I now present an irrigating drainage tube, constructed of vulcanized rubber or platinum which has, so far as it has been used, proved to answer every indication for which it is intended It is at present the ideal uterine drainage tube because

1 Its outlet can not become *obstructed and overdistend* the flabby uterus

2 It is the only tube through which irrigation may be accomplished and that will admit of continuous uterine siphonage or irrigation in those very virulent cases where life would be extinguished in a day or two

3 *By no other means is it ever safe to irrigate the* uterus without the use of a speculum, as it is never permissible to pass an instrument through the vagina by the sense of touch directly into the uterine cavity, although this folly is sanctioned by high authorities

4 We should never trust even a trained nurse to irrigate the uterus, but after once introducing this tube, a nurse can be instructed to use an antiseptic vaginal douche and then attach a No 7 English catheter—from which an inch or more of the tip has been removed—to a fountain syringe, turn on the stream, and guide the catheter into the tube As the cavity of the tube gradually tapers from the last drainage or return fenestra to the irrigation apertures the catheter will, by introducing it until resistance is felt, *fit snugly and throw the fluid into the uterine* cavity, returning it through the irrigation openings In this way, by placing a patient on a douche pan, intra-uterine irrigation may be resorted to, without the least inconvenience or exhaustion to the patient, as removal of the tube for sterilization, as a rule, oftener than every twenty-four or forty eight hours is *found unnecessary even in case of puerperal sepsis* In non puerperal patients, removal of the tube is not so often indicated Whatever the indication for which the drainage tube is used, the patient must be kept absolutely at rest until its removal

In conclusion, let it be understood that I do not wish to go on record as advocating drainage in every case of endometritis, dysmenorrhea, etc , in fact, its indication is rather the exception than the rule I am aware too, that even the majority of cases of puerperal infection will, sooner or later recover without any local treatment whatsoever, again, a few antiseptic vaginal douches are all-sufficient, or every indication may be fulfilled by one thorough uterine *cleansing But that there are rebellious cases which* tax the physician's skill to the utmost, can not be doubted, and where alertness to the danger signals, and effectual and radical treatment, is the lying-in patient's only safeguard It is equally true that physicians who scout at the idea of all intra-uterine medication and who, in a practice of ten or twenty years, never invade this organ, are far from being alive to their patients' welfare

When any treatment is to be directed to the endometrium two points, however, should under all circumstances, be kept in mind—namely, gentleness in manipulation and conscientious antiseptic precautions

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TUBERCULOSIS

Read before the Pennsylvania State Medical Society 1895

BY J M BATTEN, M D

PITTSBURG, PA

I wish to show, by clinical observation, that the tubercular *diathesis, predisposition to, or habit, is inherited* to the third and fourth generations, and that consumption has been but very slightly, if at all contagious among those who came under my observation who have not inherited that predisposition to the disease

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[2] Gazette des Hôpitaux October, 1892

[3] Manufactured by the Aloe & Penfold Company, Omaha, Neb.

Mrs G had five children She and four of the children died of phthisis pulmonalis The remaining child, a female, lived till the age of 84 years and bore ten children, five of whom died of phthisis pulmonalis Three of the latter were married and had children The eldest a male had four children, three of whom died of phthisis pulmonalis—one is still living The second one, a female, married and had one child, and within a year after the birth of the only child the latter died of children s disease and the parents died of phthisis pulmonalis The third female, married and had one child, a male, who is still living The mother died young and the husband died recently of heart disease Two females, unmarried, died young of phthisis pulmonalis Of the five living, the eldest had ten children, two of whom died of typhoid fever The remaining children are living but delicate The mother is 75 years old and has paresis The second, a female, married, had five children all living and healthy The third, a male, in his younger days had hemoptysis but removed from the city to the country and is still living He is married and is the father of five children, all delicate The fourth, a female, married a delicate man who afterward died of phthisis pulmonalis She is the mother of five children, all delicate The fifth, a male, is still living at the age of 58 years He has hemiplegia and is the father of three children small in stature but healthy

One case of another family, Mrs M , who died of tuberculosis had borne four children three of whom died young , two of them of children's diseases, the third at the age of 20 years, of phthisis pulmonalis The mother, Mrs M , died at the age of 40 years Mrs M 's parents were healthy Her mother lived till the age of 86 years, and her father till the age of 74 years The remainder of the latter's children, five in number are all living and healthy with no history of tuberculosis in the family Mrs M is the only case who came under my observation, in which the disease may be said to have been acquired

Of the fourteen cases of widows or widowers who came under my observation, whose husbands or wives died of phthisis pulmonalis, all are now living and healthy

Now the most popular theory as to the cause of phthisis pulmonalis seems to be that the cell must have a deficiency in vital energy and also must have inherited the tubercular diathesis before the tubercle bacillus can attack it with any degree of success Then it follows that a cell may have a deficiency in vital energy, not having inherited the tubercular diathesis, yet the tubercle bacillus may not attack it, or the cell may have a sufficiency of vital energy and an inherited tubercular diathesis and it may be invulnerable against the tubercle bacillus' attacks But I have no doubt, in the case of Mrs M , that the tubercle bacillus successfully attacked the cell with deficient vital energy, without it having had inherited a tubercular diathesis

On the other hand, there are those who may claim the old theory that the disease is transmitted from parent to offspring, and they might ask the following pertinent questions If there was no tubercle bacillus, would there be any tuberculosis, and if there was no inherited tubercular diatheses would there be any consumption? It is a well-known fact that "the tree is known by its fruit" You all remember how Jacob of old, transformed the sheep and cattle into "ring streaked, speckled and spotted," in order to take advantage of his father in law, Laban With our present knowledge of the laws governing procreation we would say that such a change in the color of those animals was caused by the impression made on the parents at the time of copulation That is, the change in the color of the animals depended on the impression on the ova, either through the female or through the fructifying influence of the male—the semen—at the time copulation took place Consequently, there could not have been any other factor to cause the change in the color of the animals When a person of tubercular diathesis is impregnated, or impregnates, there may be claimed to be a constitutional condition in the offspring similar to that of the affected parent This constitutional condition may affect the circulatory, nervous or glandular system in such a way as to interfere with a healthy physiologic action of the same and, thereby, producing a weakness in these various systems, and finally diseased cells and consumption are developed

I believe that the proper plan to prevent this disease, tuberculosis, is to educate young men and young women how they should make their selections, in order that their posterity may not be tainted by disease, and they should also be taught the great importance of making healthy selections

Fifth Avenue and Ross Street

SOCIETY PROCEEDINGS

Chicago Ophthalmological and Otological Society

Regular meeting, held Oct 8, 1895, at 155 Dearborn Street There were seventeen members in attendance, Dr Gradle *in the chair*

Minutes of the last meeting were read and approved

Dr Coleman reported a case of ulcer of the cornea treated by a Saemisch incision and subconjunctival injections of corrosive sublimate De Wecker says in the *Annales de Oculistique* for June, 1895 "I return to large injections of sublimate, 1 to 2000 with eserin I have ordinarily injected half a Pravaz syringe full even in very advanced cases of suppuration with hypopion Only six or eight injections are necessary to obtain recovery, with clearing up of the diseased portion" Abadie, in the *Annales de Oculistique*, 1895, writes "If the patient comes to us with very extensive suppuration of the cornea, and it is not in our power to restore the diseased parts, we are always able to preserve the portion which still remains intact To accomplish this object several methods are at our disposal—the method of Saemisch, the actual cautery What I wish to say is that to day we have a much better method, that is subconjunctival injections of sublimate, and we can in a large number of cases dispense with the actual cautery The following cases prove a surprising success one, a man, aged 48, with an ulcerated point on the cornea and a little pus in the anterior chamber Injection of two drops of sublimate, 1 to 1000 This was repeated on the third day Patient was cured without the slightest alteration in the cornea

Second case, aged 40, with extensive ulcer and large hypopion Had three injections , quite cured in seventeen days

The *Annals of Ophthalmology and Otology*, April, 1895, contains an abstract of Dr Bull's paper on the question of the "Efficacy of Subconjunctival Injections of Mercuric Bichlorid in Ophthalmic Therapeutics" A review of the literature showed great diversity of opinion among the various observers as to the value of this new treatment during the past year Dr Bull had employed these injections in forty-eight cases He summarized as follows 'Pain is always severe in spite of cocain, and reaction is apt to be very severe The only class of cases in which the sublimate injections seem to exert any positive effect in allaying symptoms and shortening the duration were those of scleritis and irido-choroiditis of the non syphilitic type The treatment is still on trial and should not be promiscuously employed in all sorts of cases "

One further quotation after all the laudation of the sublimate injection treatment, and the consensus of opinion in regard to its wonderful effect especially in hypopion ulcer The following review of Dr Bach's work is instructive, although disappointing to our expectations Under the head of "Experimental Researches on Ulcer of the Cornea, Produced by Staphylococci," Dr Bach has endeavored to demonstrate experimentally the efficiency of sublimate injections He inoculated the corneæ of rabbits with staphylococci Both eyes were simultaneously inoculated One was treated simply with instillations of atropin, the other received, in addition, subconjunctival injections, following the technique laid down by Darier In forty experiments the therapeutic results were negative Indeed, the reactionary phenomena were more intense and lasted longer He found that as long as the cornea was not perforated, no microorganisms entered the interior of the eye, even in the hypopion which is the result of exudation of fibrin and leucocytes He tried to find mercury in the eye, but did not succeed He has settled upon the following treatment for corneal ulcers the eye is bandaged, and 6 to 8 drops of atropin are instilled daily, the cul-de sacs are cleansed with physiologic salt solution, and after the ulceration progresses, the borders are lightly touched with the galvano-cautery If there is hypopion, without tendency to absorption, the cornea is punctured to evacuate it The punctures may be repeated

Finally, Dr Coleman's own case G E, aged 22, a machinist, was brought to me on September 30, last Two weeks previous a piece of steel chipped off by a turning lathe had struck the left cornea A fellow workman had attempted to remove the steel and partially succeeded Four days later the steel was removed by the family doctor Hypopion appeared on the day before I saw him At first visit there was deep conjunctival injection of the whole bulb, with a deeply infiltrated, creamy, central opacity of the cornea, two lines in diameter, the surface of which presented a superficial uneven ulceration One quarter of the anterior chamber was occupied by pus, the pupil was semi-dilated and regular under atropin, the iris was discolored, pain quite severe V=fingers at four inches Treatment, September 30 subconjunctival injections near the lower corneal margin of sublimate, 1 to 2000, and sodium chlorid 1 to 1000, 10 minims, atropin 1 per cent and later eserine 25 per cent A hot solution of boric acid was applied to the eye every two hours October 1 there was extensive ecchymosis below the cornea at the site of injection, which prevented the lids from closing The ulcer and the hypopion are about the same Given iodoform ointment in the eye October 2, cornea more infiltrated and the hypopion increased Repeated the injections of 3 minims at three points October 3, infiltration of the cornea increased at the lower three-quarters, and the hypopion was worse Fearing my patient's eye would go on to destruction under the injections, I, for a time, questioned whether to use the galvano cautery or the Saemisch incision As the cautery without perforating the cornea would not empty the chamber of pus and, if used to perforate, might entail a prolapse of the iris and severe reaction, I decided to adopt what seemed to me the most rational procedure, that is, a Saemisch incision, which I did, and pressed out the coagulated pus, prescribed formalin 1 to 1000, to be instilled into the eye every hour October 4, no pus in the chamber, less infiltration of the cornea, and no pain Corneal wound reopened and formalin repeated Since this date the opacity and ulceration of the cornea have gradually lessened, and recovery with slight opacity is assured Given a case of infected ulcer of the cornea, I believe that the galvano cautery or sublimate injections *may be good treatment*, but with pus in the anterior chamber that is not rapidly absorbed, or is increasing under treatment, it seems to me not only rational surgery to give it vent by incision, but very bad surgery to omit to do so

Dr Dodd had used the corrosive sublimate injections in a number of cases, and said his conclusions were very indefinite They proved most satisfactory in cases of severe syphilitic iritis In these cases the results were quite marked In ulcers of the cornea the treatment was of no benefit, and in many cases it made them worse In diseases of the fundus they were of no benefit, the pain of the injection is always severe It is now claimed by recent experimenters that the physiologic salt solution is even better than the corrosive sublimate, because the only action such injections have is to increase the lymph circulation

Dr Montgomery said that many cases of syphilitic iritis yielded rapidly to simple constitutional treatment combined with atropin, and that little dependence could be placed on the results of the few cases treated with corrosive sublimate

Dr Gradle spoke of the cumulative effect of anti syphilitic treatment, and said that but little effect was noticed in such cases at times until the drug had been used for some time, and then suddenly the drug began to act on them It would seem as if the new treatment were doing the work, and that it was simply due to the cumulative effect of the whole treatment He had tried corrosive sublimate injections in only two classes of cases, in one class of interstitial keratitis, and the class of syphilitic retinitis In both of these classes of cases it was possible to foretell the course of the disease, both being slow in development In such cases the injections had proved to be of absolutely no benefit He considered the Saemisch incision the best treatment for ulcers of large size, the cautery the best for the small and deep ulcers

Dr Ware believes in the Saemisch incision when hypopion is present, but he has been able to control most cases by the cautery

Dr Hale spoke of the treatment in Kiel, Germany, and said that the cautery was very much used

Dr Pinckard referred to the large number of cases of ulcus serpens that came to the Massachusetts Charitable Eye and Ear Infirmary from the granite quarries in Quincy The cases are chiefly caused by blows from fairly large stones, the size of a marble, which not only abraded the cornea, but which seemed to paralyze the nutritive function and allow the cornea to rapidly slough In such cases the routine treatment had always been the Saemisch incision, with almost uniformly good results, the cautery being rarely used

Dr Walker, of Denver, referred to similar cases seen there in which miners were struck by small pieces of stone and had noticed the same interference with the nutritive function The Saemisch incision was also chiefly used by him

Dr Coleman said, in closing, that De Wecker, of Paris, recommends the use of eserin instead of atropin in cases of ulcer of the cornea

Dr Pinckard spoke of the use of pilocarpin in a similar way

Dr Colburn showed a piece of iron removed from an eye It entered the eye about four lines from the corneal edge, passed across the globe and lodged in the retina The next day the piece of iron was removed with a magnet The second day a large opacity in the vitreous developed, and on the third day opacity in the posterior capsule began In a few days the whole lens was perfectly opaque although it had not been touched either by the foreign body or by the magnet The wound healed very kindly in a short time, without any pain, redness, or other symptom

Dr Gradle had seen a case where on the fifth day after the injury the whole vitreous was opaque The wound was in the upper cornea and the foreign body (a piece of steel) was easily extracted with a magnet

Dr Colburn said this was the third case he had had in which opacity followed in the lens when the lens was not touched

Dr Dodd had a similar case

Dr Pinckard asked if any member had had a case in which a foreign body was removed from the vitreous and the case recovered useful vision

Dr Montgomery had one case in which a foreign body was removed from the vitreous within half an hour after the injury, and many months afterward the patient had useful vision

A number of cases of foreign bodies remaining in the eye with fairly useful vision were spoken of

Dr Walker reported a case in which a man was shot through the iris and lens, the shot lodging in the sclera behind The shot could not be seen with the ophthalmoscope on account of the hemorrhage, and the eye-ball was removed

Dr Pinckard had seen two cases in which the shot had gone entirely through the eye-ball and lodged in the orbit

Dr Montgomery had seen one such case, but the shot was a large buck-shot, and the eye was so much torn that it was removed

Dr Gradle showed some beautiful photographs of sections of the ear

On motion, the Society adjourned

C P Pinckard, Secretary,

103 State Street

Southern Surgical and Gynecological Association

Abstract of the Proceedings of the Eighth Annual Meeting, held in Washington, D C, Nov 12, 13 and 14, 1895

(Concluded from p 911)

FIRST DAY—AFTERNOON SESSION

DR GEORGE H NOBLE, of Atlanta, Ga, read a paper entitled,

ONE HUNDRED AND SIXTY-SIX CASES OF CANCER OF THE PREGNANT UTERUS OCCURRING SINCE 1886

The author's attention was directed to this subject by four cases that came under his observation, his success in dealing with them had encouraged him to look more carefully into the treatment, and as a result he had collected 166 cases of cancer of the pregnant uterus which had occurred since 1886, the time of the Bar thesis Dr Noble then confined himself mainly to the statistics of the treatment and results, referring to Bar, Cohnstein and others for information concerning the age, the period of recurrence, the period of abortions, etc There were twelve partial amputations of the cervix in the seven months of pregnancy, averaging five and a half months, 96 6 per cent of the mothers recovered from the operation, while 8 3 per cent died, 66 6 per cent went to full term, one child dying subsequently, and 41 6 per cent aborted Two mothers had subsequent operations performed for the removal of cancer, but there was recurrence in both cases Another conceived a second time, and died thirteen days after confinement of peritonitis Of the three cases of intra vaginal amputation of the cervix, two recovered from the operation, giving a mortality of 33 3 per cent , the children the same One mother died of peritonitis, one died suddenly six weeks after confinement, and the third had two subsequent operations for the removal of the malignancy The intravaginal amputations give a combined mortality from operations, of mothers 19 3 per cent, of infants 40 per cent Sixteen supravaginal hysterectomies were done prior to the seventh month, with a mortality of 6 2 per cent , six had recurrence of the disease, three had no return and seven were not observed There was therefore an ultimate *mortality* of 66 6 per cent In the sixteen cases in which the records are complete, thirteen cases were lost, a mortality of 82 5 per cent Of the remaining three, one went to full term, and the other two were not mentioned One case aborted thirty five days after conception, aborted again in forty days, conceived a third time, was delivered normally, and was well five years afterward There were twenty-three vaginal hysterectomies In two cases the results were not recorded, leaving twenty one cases, all successful There were seven cases of vaginal hysterectomy in the puerperal period from fourteen to twenty days after abortion or delivery, all recovered

The total number of abdominal hysterectomies was sixteen, twelve of these were Freund's operation, one after Mackenrodt's method, and the remainder not described Of eleven cases, seven died from the operation One case had enchondroma of the pelvis, another had return of the cancer in one year, and a third had a return in a few months, and died seven days after an operation for *ileus due to cancer* of the intestines These three are the only ones with complete records, therefore it is impossible to give an estimate of the ultimate recoveries The products of conception were all lost

Cæsarean section was done forty-three times, as follows conservative (or Sänger) twenty-six, Porro, nine, Freund's, eight times Of the twenty-six conservative operations, sixteen died and seven recovered, in two, the results are not recorded, and one was dead before the operation was performed, mortality in twenty three cases being 43 7 per cent

The number of recoveries in the Cæsarean Porro operations were four, deaths five, mortality of 55 5 per cent In eight Cæsarean sections by the Freund method, there were three recoveries and five deaths, giving a mortality of 62 5 per cent

A short summary shows 1, that vaginal hysterectomy should be safe in the early months of pregnancy and the puerperal state, when there is a reasonable hope for the mother, 2, that abdominal hysterectomy should be done when the uterus is too large to be rapidly and safely removed through the vagina, 3, that at or near the end of pregnancy, Cæsarean section should be resorted to, when the child's interest is to be considered, 4, that Cæsarean section with Freund's operation is permissible when the disease is confined to the uterus and the child is viable, 5, that in doubtful cases, cutting of the cervix and rapid delivery may be judicious when the incision can be made in nonulcerated or non infiltrated tissue, 6, that as there are four chances to one, against the life of the fetus, and as an equal number of mothers may be ultimately cured in the early stages of the disease, the safety of the fetus should not be allowed to hazard the life of the mother, and that, upon the other hand, the futile efforts directed to the interest of the mother when her case is hopeless, should not jeopardize the safety of the fetus in the latter months of pregnancy

DISCUSSION

DR HOWARD A KELLY, of Baltimore, said that cancer of the pregnant uterus is rare He had seen but three cases If the cancer is seen in the early stage when it presents itself as a mere nodule on the cervix, not apparently extending into the broad ligaments and pregnancy is approaching, it would be safe to let pregnancy go on to full term and labor to take place naturally Per contra, if the cancer has advanced to such an extent that there is a possibility of involvement of the broad ligaments, the surgeon could not operate too soon, because under the conditions of pregnancy the growth of cancer of the cervix is much more rapid than it is ordinarily

DR VANDER VEER, of Albany, stated that four years ago he operated on a case, doing a vaginal hysterectomy Pregnancy had advanced about four months He felt happy about the case for two and a half years, at the end of which time cancerous nodules presented themselves at the site of the cicatrix Pregnancy had advanced to full term The patient lived for a period of eight months The pelvis was filled with a cancerous deposit Dr Vander Veer reported another case of cancer of the pregnant uterus, and while the patient recovered from the removal of the uterus, she subsequently died from recurrence of the disease

DR E S LEWIS, of New Orleans, contributed a paper entitled

HYSTERECTOMY FOR FIBROIDS

The author said that hysterectomy for fibroids, now a justifiable and recognized operation for the preservation of health, the prolongation and the saving of life through important operative procedures, minimizing the element of risk, had reached its present enviable position by the substitution of direct ligation of the uterine arteries, for the unsatisfactory methods heretofore employed to secure immunity from hemorrhage, these measures often failing to prevent bleeding and not infrequently there was exposure to infection through the region of the cervix Complete hysterectomy, whether by the vaginal route in fibroids of moderate size, through the abdomen in certain cases, or by the combined abdomino vaginal method in other instances, heralded a brighter era for the future of hysterectomy That exceptions might occur with regard to individual cases, rendering the complete operation inadmissible, he was prepared to admit The author then reported eight cases in which the complete operation was practiced

Case 1 —Patient aged 53 years Tumor the size of a seven months pregnancy Operation performed March 11, 1894 Incision from pubes to two inches above umbilicus Omentum detached from anterior surface of tumor to which it was adherent, a portion of omentum ligatured and cut off on account of free oozing The subperitoneal fibroid attached to the fundus was lifted out and upper portion of ligaments ligated and divided The bladder was then detached and vaginal roof opened in front and behind The lateral vaginal connections and lower portion of broad ligaments were transfixed and ligated with a double ligature and the uterus freed One suture through middle of vaginal vault The incision (abdominal closed) and the vagina loosely packed with iodoform gauze pushed above vaginal roof for drainage on account of some slight venous oozing The tumor weighed twenty-five pounds This patient made a satisfactory recovery

Case 2 —Patient, 48 years of age, had profuse uterine hemorrhages Uterus as large as a five months pregnancy from interstitial fibroid Endometrium curetted and iodine injected without relief Hysterectomy by the vaginal method Recovery

Case 3 —Patient, aged 63 years Diagnosis interstitial fibroid with carcinoma of cervix The uterus reached the middle of the hypogastrium and was about the size of the preceding case Its removal was easily effected in the sam manner Ligaments were secured with clamps The fibroid about the size of an orange, was not weighed Recovery

Case 4 —Patient, aged 44 Uterus enlarged from sma fibroids Vaginal hysterectomy followed by recovery

Systematic delirium Of this type two varieties have been found so far, among the aged delirium of persecution and of grandeur Published cases are rare as yet, but enough are known to show that this delirium is not confined to adults The aged may create delirious conceptions with a cohesion, an energy, a logic—if we may call it so, fully the equal of those found in other periods of life

Moral or instinctive insanity Ritti uses this term to designate those pathologic states consisting principally of an often irresistible ardor for culpable and dangerous acts Age is not exempt from this species of aberration, and the less so, since advancing age with its depressed will power weakens the resistance to morbid impulses Hence, the cases of kleptomania, of homicidal mania, and especially those frequent aberrations of the genital sense observed as often in women as in men

Hysteria is another psychosis which may be found even in advanced age, as Henry has pointed out Anesthesia, and especially hemianesthesia is rare in the aged hysteric, while hyperesthetic zones, and notably the hysterogenous are frequent Convulsive movements of the limbs are also infrequent, but on the contrary, painful and spasmodic phenomena in the viscera are very intense So we may define senile hysteria as a "painful hysteria with splanchnic manifestations " As regards the mental state, this differs but little from that we are accustomed to in younger persons

Somatic symptoms The study of these symptoms in psychoses of the aged is of prime importance All the organs of the economy should be examined with scrupulous care Disturbances of the cerebral circulation (ischemia and hyperemia) are frequent in the aged, either from cardiac lesions or from athero matous arteries The urinary organs rarely escape, micturition becomes difficult, cystitis is frequent The kidneys are often diseased, with concomitant urinary insufficiency and uremic intoxication, and it may even be asked if most of the cases of mental confusion are not due to this intoxication

THE PHYSICIAN IN THE BIBLE AND IN THE TALMUD

Very few people study the Bible as a source of purely historical information The same remarks are also true of the Talmud While not so very few studies have been published of medicine and medical men as represented in these two books, yet it can safely be said that the majority of such studies are practically useless from a strictly scientific standpoint because they are more or less tinged with personal religious sentiments, and lack the purely objective character of historical researches It is consequently very interesting to read a recent historical study of the physician in the Bible and in the Talmud by Dr Preuss,[1] of Berlin, concerning which there can be no doubt but that its representations are entirely uninfluenced by the religious sentiments of the writer

The physician of the Bible and of the Talmud treated not only internal diseases, but also the diseases of the eye, of the teeth and the various surgical affections, especially injuries of various kinds, such as the bites of snakes, fractures and the like In one place it says that when a person tumbles from the roof, then the doctor comes and puts plaster on his head, his hands and his feet Amputations were performed under various indications such as gangrene, in leprosy, and other conditions The Emperor Titus Vespasianus was trephined It is even mentioned that attempts at covering cranial defects were made A very frequent operation was the ritual circumcision The rōphē, as the Biblical physician was called, was also consulted in regard to gynecologic affections, and it seems that he was interested in midwifery

In doubtful religio legal questions the physician, or rōphē, was sometimes called as an expert It is also quite clear that some attempts at scientific investigation were made, because it is stated that students of Ismael examined post-mortem the body of a prostitute, who had been burned to death under the sentence of a Roman judge, in order to determine the number of bones in the human body Like the doctor of antiquity in general, the rōphē was also his own druggist He had a receptacle in which "all remedies are contained " He prepared the theriac, that wonderful mixtum compositum of antiquity which consisted of sixty-four ingredients He spread his own plasters

Concerning specialists we learn only this, that a certain ben Achijah was appointed for "intestinal diseases " of the priests of the temple But in addition to this temple doctor, official medical positions do not seem to have existed Military physicians are not mentioned, and King Joram had to return to his home in order to be cured from sickness This is not so very remarkable, because in Biblical times neither Greece nor Egypt possessed any sanitary systems As regards the time and the course of study of Biblical physicians we possess no information whatever Puschmann[2] assumes that the student received personal instruction from persons experienced and trained in medicine We read of a student of a physician from whom "he had learned all the ordinations of physic " There is no mention of any medical schools

The first physicians spoken of in the Bible were Egyptians, slaves of Joseph Their activity seems to have been confined to the art of embalming The regulations concerning leprosy contain no mention of medical men

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[1] Archiv für path Anat u Phys und für kl Medicin, Bd 188, Heft 2

[2] Gesch d medic Unten , B 26

In the Talmud, four men are expressly designated s "the doctor " 1, the physician Thudos or Theodorus who, it is assumed, studied in Alexandria, because he is frequently quoted as saying that in Alexandria every female swine and every cow was castrated before exportation in order to prevent the increase of the race outside of the country It is also stated that he came into the schoolhouse and declared that certain vertebræ and cranial bones placed before him did not come from the same person 2, Tobijah and 3, bar Gionti, concerning whose achievements nothing is known 4, the physician Minjomi or Binjamin, who designates all fluids as noxious for the ear except the juice of the kidneys

The work of physicians was always highly appreciated among the old Jews In Hebrew the designation physician, is derived from a root signifying to relieve, ameliorate, whereas in other languages the term usually comes from a root meaning to know "Even when the physician sees that his patient is near to death he says to him Eat this, not that, drink this, not that, but he does not say, Your end is near" The physician was responsible for his doings Any intentional injury was punishable according to the laws of the land, but if the injury was the result of a mistake on the part of the physician then he was not held responsible to the worldly judge, but the decision and punishment was left to the higher judge It will be remembered that in Greece and Rome the physician was exempt from all punishment, even for the intentional killing of the patient The Jewish physician *was not permitted* to treat heathens any differently from his own fellow-believers, he was to bestow equal care on both This liberal tendency went so far that even heathen physicians of standing were allowed to perform ritual circumcision

Medical services were recognized in those days as vorthy of compensation "A free doctor is no good," aid a wounded man to his assailant, whose duty it vas to "pay the bill," and who wanted to bring the vounded to "a free dispensary " We read of a docor that he had a certain place in his consultation oom where the money he was to have was placed f the doctor observed that a patient was poor, then e gave the patient money and said "Go, strengthen ourself!" Concerning the liberality of the fees of almudic physicians nothing is known

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HE WORK OF THE OPHTHALMIC SECTION FOR 1895

Preceding issues of the Journal have laid before s readers the work of the Ophthalmic Section hose interested in this subject know best its worth, s scope and its thoroughness Such as were so fornate as to see the members in session at Baltimore re able to add personality to the actual work and ake its value more realistic It suffices to say that every band of ophthalmic workers in the United States and Canada was adequately represented, and that the papers under consideration represent the ophthalmologists of the entire continent

The most casual study shows that the papers and discussions were the result of careful planning by the Section officers To the Chairman, Dr Jackson, and the Secretary, Dr Wurdemann, is due the credit of perfecting as well as devising these plans which were fully adopted by the Section The brevity of the papers and discussions is accounted for, when it is known that each individual was notified in advance of his preparation that but twenty minutes would be allowed for the reading of his paper, and but five minutes for any discussion This compelled crisp statement of fact and reasoning, and gave the Section a succession of fresh speakers This character of the papers and discussions renders their study by the worker in other fields easier and more attractive

Papers discussing portions of one general subject are found placed in such logical order as to be discussed and studied together as well as separately Thus incipient cataract, the operative treatment of immature and some forms of zonular cataract, and the operation for secondary cataract formed one group

Then we find a group of papers discussing many points respecting plastic operations of the eye, the restorations of the eyelids with sliding flaps, transplantations of skin in plastic operations on the eyelids, skin grafting in ectropion and entropion, transplantation of a strip of skin into the intermarginal space, some cases of the restoration of the eyelids by plastic operation

Another series of papers treat of intra ocular diseases and injuries, as the evisceration of the eyeball, histologic and bacteriologic notes on cases of penetrating wounds of the eyeball, etc , hemorrhage into the retina and vitreous in young persons associated with evident disease of the retinal blood vessels, extensive colloid changes of the choroid, prognostic significance of albuminuric retinitis

There are many papers dealing with various points relating to the ocular muscles, altogether forming a timely discussion of many moot questions Among these may be mentioned the technique of tenotomy of the ocular muscles, the slight effects sometimes produced as the result of free tenotomies of the ocular muscles for heterophoria, the limitations of tenotomy of the ocular muscles, tendon advancement with a special indication for its employment, the indications for, advantages and technique of muscle shortening, strabismus, the extent to which recently suggested methods of muscular exercise should displace tenotomy in the treatment of heterophoria, practical points gained in the treatment of one thousand cases of insufficiency of the ocular muscles, hysterical affections of the eye muscles, and some remarks on the paralysis of the superior rectus muscle As in the other groups of papers, a discussion of many of the points made, added greatly to the aggregate value of all

Another group of papers discuss points respecting diseases of the orbit and the tarsal cartilages

Still another group discusses moot points on refraction of the eye and includes an elaborate report of a committee on the examination and care of eyes during school life

Finally, there are a considerable number of unclassified papers treating of living questions in ophthalmology In whatever manner regarded, the Ophthalmic Section for 1895 merits the attention of every worker in this field, and will prove helpful to many in other fields of medicine The methods and spirit of the Section must stimulate other sections to that which is best, and materially assist in raising the entire ASSOCIATION to the highest attainable standard, and so promote the real development of the entire medical profession It may interest those not members of the Section'to know that the volume of Transactions of the Ophthalmic Section, with the discussions complete, are now passing through the press, and can be obtained at the JOURNAL office for $1

QUIS CUSTODIET CUSTODES?

The New York *Medical Record* in one of its latest issues calls attention to the impropriety of the chief medical member of the New York State Lunacy Commission appearing on the witness stand as a paid medical expert in cases where insanity is involved Its exceptions are well taken, since the Lunacy Commissioner is an officer who may in that capacity have later to pass on the same cases He stands between the insane and the asylum authorities under certain circumstances, and his prejudging their case as an expert witness is in a way a violation of their rights as it is also a wrong to the public

In Great Britain, we believe, no asylum officer is legally permitted to testify as to the mental condition of a person who may afterward be committed to his care, or, at least, to have any share in the certification of his insanity for his commitment The rule is not a bad one as far as it applies to matters of commitment to the special charge of the testifying witness, though it should not be so widely construed as it is perhaps in England, so as to really exclude competent expert testimony where individual interest could play no part in making or modifying the opinion But if it is applicable to asylum keepers, it is still more so to those who are over them in a supervising capacity, and this, it would seem, ought to suggest itself to every one holding such positions. The presumption that such is the case is probably the reason for any lack of specific statutory provision to that effect

The really most essential and important function of a lunacy commission, and for this every State should have one, is a judicial one, and it should therefore command the highest legal and medical talent for the solution of the dubious questions relating to mental derangement that may come before it It should be the protector of the individual as well as of the public,and its members should keep themselves from all bias or precedent that can disadvantageously affect them in either of these relations, and as they are really in a sense, a court of last resort they should not put themselves on record as having opinions as to individual cases that can by any possibility come later under review by them

These, at least, would seem to be the only views that could be held on a full consideration of every phase of the case, by men with a high sense of personal honor But with what MR HOWELLS calls the "business ideals" of the present age, the sense of honor is a variable quantity, and many respectable and even estimable people fail to realize the higher signification of the term in all the practical relations of life In these matters, even if honor, which may seem to some a sort of medieval and aristocratic conception, does not appear to be involved, a strict sense of propriety which often amounts to the same thing and is quite akin to nature, should be cultivated and made to regulate conduct

A lunacy commission does not serve its full purpose by devoting itself to the regulation of expenses and the collection of statistics of insanity, these are the "tithing of mint, anise and cummin," and other things yet are the ' weightier matters of the law''

CONNECTICUT KEEPS "OPEN HOUSE" FOR QUACKERY

The profession of Connecticut has been unable to secure the same class of registration acts that obtain in many of the eastern States, which fact is alleged to be painfully felt in the competition of practice in the large towns The October issue of the Bulletin of the State Board of Health shows that a movement is on foot that will tend to correct the evil It says

The following action was taken at the last meeting of the New Haven Medical Association, having been proposed by DR MAX MAILHOUSE

WHEREAS, In consideration of the fact that large numbers of graduates of colleges, which in this State are recognized as legal and reputable, are being rejected by examining boards in other States where the possession of such diplomas is not in itself sufficient to entitle the holders thereof to practice, and

WHEREAS, As a consequence of the foregoing fact, this State has become the dumping ground of other States with respect to undesirable practitioners, and

WHEREAS, In our opinion it behooves the State for its own protection to guard against such invasion, it is

Resolved, By the New Haven County Medical Association, that the attention of the other county associations, the various State medical societies and the various committees on lists of medical colleges be called to this state of affairs, and that, pending legislative action, these committees be re quested to revise such lists that they conform to the tenor of these resolutions further be it

Resolved, That the State Committee on Legislation be instructed to advocate the amendment of the law, so that all candidates for registration be required to pass an examination, as is now the case in New York, Pennsylvania and many other States

Adopted by the New Haven County Medical Association at its semi annual meeting in Meriden, Oct 17, 1895

CORRESPONDENCE

The Rush Monument

MONTCLAIR, N J, Nov 18, 1895

To the Editor —I note among the bright paragraphs which as usual make up the column of Miscellany in your issue of the 9th inst, one relating to the monument which our friends, the homeopaths, propose to erect to the originator of their faith I observed also that you acknowledge that the regular profession is somewhat slow in building a monument to one of the pioneers of medicine in America, Dr Rush I could not help thinking as I read, that it is comparatively easy to accomplish anything when the faith, enthusiasm, *amour propre*, or self seeking of a number of people are directed *in one channel or toward one object*

There are many names in regular medicine beside that of Dr Rush which ought to be perpetuated and which will be perpetuated, with or without a monument so long as medicine is faithfully studied and honestly practiced In homeopathy, on the other hand there is only one name, that of a man, a foreigner, who like Mohammed was an enthusiast, if not a fanatic, whose *delirium du grandeur* led to the evolution of the tenets of the sect which now seeks to do him honor His memory does not need the monument He will never be forgotten Great is homeopathy and Hahnemann is its prophet!

Meanwhile, those of us whom a recent talented homeopathic writer dubs, "the dominant school" of medicine, had probably better concentrate our efforts and raise a monument to Dr Rush and also to the immortal Warren, as two typical *American* statesmen, patriots and physicians

Very truly yours, RICHARD C NEWTON, M D

Dr Gihon writes to contradict the story that his committee have been negotiating with the same sculptor as the 'homeopathic" people

The Passing of Hypnotism

SHAFTSBURG, MICH, Nov 20, 1895

To the Editor —In the JOURNAL of November 16, p 867, is an editorial, "The Passing of Hypnotism" The criticisms in said editorial seem well taken Some six or eight years ago this community was a witness of its effects as a psychic agent This note is penned, needlessly perhaps, to illustrate the correctness of your conclusions Hypnotism is, unquestionably, a dangerous agent, requiring a morbidity of mind for its manifestation Now to our case

A young farm laborer went to a public meeting where hypnotism was practiced by a traveling lecturer, as he styled himself The young man was hypnotized Next day he was excused from work because his employer discovered that, using his own language, ' He did not know what he was about" There was a condition of mental depression, a dullness, amounting almost to stupidity which lasted many months People who have seen him since I have, declare he has not yet recovered and never will An agent which requires a state of mind for its exhibition must be soon It seems degrading for scientific men to use the "tools" of "traveling lecturers" Its use seems not a little like "*Similia similibus curantur*" with the *curantur* wanting

G W CHROUCH, M D

Was It Leprosy?

SPOKANE, WASHINGTON, Nov 22, 1895

To the Editor —My experience with lepers would point to Dr McDougal's cases as being undoubtedly leprosy

In the Sandwich Islands many cases can be found to disprove Dr Ashmead's statement that "if they were lepers the mother would have been infected too"

Dr Geo L Fitch, of San Francisco, who was for some years medical officer at Honolulu and by whose courtesy I saw some hundreds of cases of leprosy, asserted that all the leprosy in the Islands among the natives was "syphilis run riot in a virgin race," and defended his position so vigorously that the Government sent to Germany for Dr Arnold to decide who was right This was necessary as all lepers are sent to Molakai to the leper settlement from which place only death can relieve them

Dr Arnold's decision was in keeping with the opinion of all the old time doctors in the Islands and was based upon months of careful research, and I am sure that if Dr McDougal's two patients were to go before any medical examining board at Honolulu they would be sent to Molakai without a dissenting voice Very truly,

D C NEWMAN, M D

Triplets

MILTON, KY, Nov 23, 1895

To the Editor —Mrs Wm H Meiers, a German, primapara, 31 years of age, gave birth to two boys and one girl on the 17th inst One, a boy, is still living, the other two having survived but a few hours

A woman in this (Trimble) County once gave birth to four children at one time S E HAMPTON, M D

BOOK NOTICES

Pediatrics, the Hygienic and Medical Treatment of Children By THOMAS MORGAN ROTCH, M.D Illustrated Philadelphia J B Lippincott & Co Cl, pp 1124 1896

As might be expected, coming from Harvard, our oldest university, the work is at once scholarly, painstaking and thorough It is divided into eighteen divisions as follows Division I three lectures, *a*, Introductory, (infant at term) *b, Fetal Circulation c*, Vernix Caseosa, II, Normal Development, (four lectures), III, Hygiene of the Nursery, IV, Feeding (six lectures), V, Premature Infants, VI, General Principles of Examination and Treatment, VII, The Blood in Infancy and Childhood (four lectures), VIII Diseases of the Newborn (three lectures) IX, Diseases of the Skin, X, Syphilis, Erysipelas—the Exanthemata (five lectures), XI, Diseases of the Nervous System and the Myopathies (fourteen lectures) XII, Diseases of the Mouth, Nose, Naso pharynx, *and Pharynx (three lectures)*, XIII, Diseases of the Esophagus, Stomach and Intestines (three lectures, XIV, Diseases of the Liver, Pancreas, Spleen and Peritoneum, XV, Diseases of the Kidneys, Bladder and Genitals, XVI, Diseases of the Larynx, Trachea Lungs and Pleura (three lectures), XVII, Diseases of the Heart and Pericardium (two lectures), XVIII, Unclassified diseases viz, rhachitis scorbutus, rheumatism purpura diabetes tuberculosis, epidemic influenza diseases of thyroid gland diseases of the cervical lymph glands parotitis diseases of the ear

As will be seen the book consists of fifty three lectures feeding and on "the blood in infancy and childhood" without not only realizing what immense strides have been taken in the study of pediatrics in the last fifty years, but when the various incubators for premature births, and apparatus for preservation and sterilization of food are considered, but wondering what the world is coming to At this writing our eyes happen to fall on two old volumes, Farre, "*Maladies des Enfants, de la Naissance a la puberté*," (diseases of children from birth to puberty), Paris, 1847 And in these two closely printed volumes, in which everything relating to the medicine and surgery of childhood is stated, there is not one line on hygiene, excepting the appendix which is given up to "the physiologic education of young children," and in which the question of milk is indeed considered, but how diffusely! How crude the methods of milk examination compared with those figured in Rotch's book, and not a line on preservation, modification or sterilization of milk! How the learned Farre would stare at the proposition to count the blood corpuscles, to estimate the red and white and the hemoglobin!

The last half of this century may well lay claim to precision in method, to accurate knowledge in physiology of development, to direct therapeutic measures, and to its great and crowning glory in advanced preventive medicine may the next half century show equally great advances! We accept the book of Professor Rotch as in the foreground of the existing knowledge of pediatrics in the closing years of the nineteenth century The decimal system of dosage and of weights and measures is used throughout the book

We can not close this notice without complimenting the publisher on the excellent style of the volume and the very handsome illustrations

The Principles and Practice of Medicine Designed for the use of Practitioners and Students of Medicine By WM OSLER, M D Second edition New York D Appleton & Company Cl, pp 1143 1895

This excellent text-book has so soon passed to its second editon that it must be accepted that a discriminating profession has given its judgment in its favor, and indeed it is well worthy of the generous reception it has met with from whatever standpoint we view it This edition has been carefully corrected and many additions made Nor is the increase in bulk due to mere padding, for a comparison with the former will easily show that the additions are such as the progress of modern science have brought to the front The work is divided into eleven sections as follow

I, Specific Infectious Diseases, II, Constitutional Diseases, III, Diseases of the Digestive System, IV, Diseases of the Respiratory System, V, Diseases of the Circulatory System, VI, Diseases of the Blood and Ductless Glands, VII, Diseases of the Kidneys, VIII, Diseases of the Nervous System, IX, Diseases of the Muscles, X, The Intoxications, Sunstroke, Obesity, XI, Diseases Due to Animal Parasites

There is everything to praise and little to find fault with in this book We can not in the space of a mere notice undertake to write a criticism of so exhaustive a work, but we think when the next edition appears the distinguished author will take a less pessimistic view of the antiseptic and eliminative treatment of typhoid fever, (p 40) and he will at least refer to the syphilitic forms of myositis, (p 1050)

Handbook of the Diagnosis and Treatment of Skin Diseases By ARTHUR VAN HARLINGEN, PH B, M D Third edition, enlarged and revised, with 60 illustrations Philadelphia P Blakiston, Son & Co 8vo, cl, pp 577 Price $2 75 1895

This handbook takes up the various diseases of the skin, in alphabetical order, without regard to classification, an arrangement which although very convenient, necessarily gives rise to some overlapping, and causes the reader to make various digressions to other pages when reading on any particular topic For students preparing for examination, and for practitioners as a ready reference book, it be found very useful It is to be regretted that all the p scriptions, very numerously dispersed throughout the v ume, are written in the old style, and that the decimal s tem is entirely ignored When the new British Pharma pœia shall make its appearance, it is understood that t decimal system will be adopted and then there will be pharmacopœia in any language adhering to the old syst The trend of modern science in all departments is t universality, and it is a pity to see a *new* book so persis ently looking backward in this matter

Precis de Manuel Operatoire Par L H FARABEUF, Profess a la Faculté de Médecine de Paris, Fin de l'Ouvrage (p 69 à 1082) Résections—Appendice Aout 1895 Paper, 8v Paris G Masson 1895 [From P Blakiston, Son & C Philadelphia]

In 1872 Farabeuf commenced the work by a book on lig ture of arteries, which was soon followed by the second bo which was on amputations[1] In 1893, the first and secon books, which had reached respectively the fourth an fifth editions, were included in a single volume and the on now under consideration is the third book, and is devoted t resections, with exception of an elaborate appendix in which is discussed the subject of trephining, excision of nerves of the face, œsophagotomy, tracheotomy, symphseotomy, ischio pubiotomy, coccygeotomy, sacral luxation, recto-vaginal fistula, exstrophy of the bladder The volume concludes with a program of an operative course whereby with four cadavers, four students may accomplish a fairly complete operative course in eighteen séances The work has not described *all* the recent operations, as the author pathetically says, but he has described enough of them to answer all practical purposes, and the remainder he will leave to some younger man

Those who read French will enjoy the candor and quaint expressions of the author, which serve to enliven the pages of the handbook The illustrations are excellent, and as a whole the work is a notable addition to the literature of the subjects within its scope

Principles of Surgery By N SENN, M D PH D, LL D Second edition Thoroughly revised Illustrated with 178 wood engravings and colored plates 8vo, cl, p 656 Philadelphia The F A Davis Company London F J Rebman 1895

The growth of knowledge of surgical pathology since 1890 is so great that a revision of the work was necessary The great learning and vast clinical experience of the author are shown at their best in a work of this sort, and while the book has been revised to date by the addition of new matter and new illustrations, the arrangement remains the same as in the first edition For an elaborate review of the first edition, by Prof Christian Fenger, see this JOURNAL, Feb 14, 1891, vol XVI, 1891, p 250 The book is destined to hold the boards as a text-book for some time to come, and with justice, for it is a fair and exhaustive exposition of the teaching of the day on the subjects of which it treats We welcome the volume to our library as the latest and most mature thoughts of the distinguished author on the fundamental principles of the science and art of surgery

The Medical Register of New York, New Jersey and Connecticut 1895-96 Vol xxxiii Published under the supervision of the New York Medico Historical Society JOHN SHRADY, M D, editor New York and London G P Putnam's Sons

This annual volume of 250 pages, well printed and bound, gives much valuable information regarding the status of the profession in one of the eastern medical centers that is obtainable in no other form An arrangement of material better classified than in the earlier issues renders reference more ready, while the somewhat more complete chronological record and the severer taste of the obituary notices impart the air of a closer attention to the historical element

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[1] This was translated by Dr Jno D Jackson, of Philadelphia, in 1874

The list of physicians of New York and Brooklyn shows many changed addresses, and many removals to outside localities Evidently the gradual change of the rental year in the great cities of the East from May to October, and the apartment system of merely monthly responsibility to the landlord, are bearing fruit in the medical as well as in other callings

The Physician's Visiting List (Lindsay & Blakiston's) for 1896 Forty-fifth year of its publication Philadelphia P Blakiston, Son & Co

This well known visiting list makes its forty-fifth annual appearance with the same clean pages and excellent arrangement that have characterized it for so many years A dose table has been compiled for this edition by Dr Geo M Gould, giving the doses of official and unofficial drugs in both the "English" and metric systems

The value of this list is unquestioned and the long period during which it has been published, is sufficient evidence if any were needed, of the popularity of the work

Urinalysis, including Blanks for Recording the Analysis and Microscopic Examinations of the Urine For medical practitioners, life insurance examiners and specialists Arranged by JOSEPH C GUERNSEY A M, M D Philadelphia J B Lippincott Company 1895

This book has 500 blanks for recording the results of examinations of urine, and by their use it is practicable for the physician to keep the record of an ordinary or of a minute examination, moreover it can be kept as a continuous record in long cases The blanks are preceded by a valuable practical chapter on apparatus and reagents, and the description of the various tests The book is indexed

PUBLIC HEALTH

Diphtheria in New Jersey —Owing to the alarming prevalence of diphtheria in Burlington, the Board of Health has ordered that all public schools be closed Consequently the doors were shut for an indefinite period The infant department of one of the Sunday schools has also discontinued its sessions for the present There have been thirty cases reported to the Board of Health, seven of which have resulted fatally Every possible measure is being taken to stamp out the disease Twenty-one cases of diphtheria have been reported to the Trenton Board of Health within four days, and of these four have proved fatal There were forty-eight cases of the disease reported last month

The Abolition of the Contaminating Slate —War against the school slate and pencil has been declared. Following the example set by the New York City Board of Health, calling upon the school authorities to abolish the use of slates on the ground that they spread contagion, comes the adoption of a resolution by the Mount Vernon Board of Education to the same purpose and providing for the use of pads of paper instead The alleged reasons for this action, in addition to the objection to the slate from a sanitary point of view, is that paper is now cheap pads now being sold which are suitable for school purposes for from 2 to 5 cents each Public school and health authorities in many cities and towns now have the subject under discuss and will probably likewise decree that the slate and slate pencil must go These hitherto useful articles will now be of value only to receive "spirit messages" from the other world through so-called mediums

Variola and Vaccinia, their Manifestations and Inter-relations in the Lower Animals —Copeman (*Journal of Pathology and Bacteriology*, Vol ii, No 2) concludes his researches concerning the above subjects in the following propositions

1 The organisms, to which the specific action of variolous and vaccine lymph is due, are, as yet, undiscovered

2 Although this is the case, all the most reliable evidence, experimental and otherwise, is in favor of the organisms of these two diseases being identical in nature, the phenomena of vaccination being most probably due to an attenuation of the virus, caused in a similar manner to that witnessed in chicken cholera and other diseases by sojourn in the tissues of an animal which is more or less refractory

3 Monkeys react to inoculations of variola and vaccinia in a similar manner to the human being, and therefore afford valuable means of controlling the results of experiments on the mutual relationship of the two diseases

4 It is possible to isolate from vaccine (and also to a less extent from variolous) lymph a number of microörganisms, none of which, however, have anything to do with the specific action of the lymph

5 These bacteria belong, in great part, to that class which is concerned in the process of suppuration, although others both pathogenic and non-pathogenic in nature, may be present also

These "extraneous" may be destroyed, if present by the following method of treatment which Copeman, like others, found would preserve the lymph unimpaired for an indefinite period, indeed, its specific activity so far from being destroyed, may actually become intensified, the lymph is mixed with a certain proportion of (75 per cent) glycerin in distilled and sterilized water prior to storage in capillary tubes which latter also had been sterilized by heat There seems to be no doubt but that the glycerin method of storage of lymph offers the easiest solution of the problem of securing an aseptic vaccine virus

Health Reports —The following health reports have been received by the Supervising Surgeon General, Marine-Hospital Service

SMALLPOX—UNITED STATES

Louisiana New Orleans, November 9, to 16, 17 cases, 2 deaths
Michigan Detroit and Rochester, November 9 to 16 smallpox reported present
Tennessee Crittenden County, October 23, 1 case, Shelby County, November 13, 1 case

SMALLPOX—FOREIGN

Cairo October 22 to 28, 1 death
Dublin November 2 to 9, 2 cases
Guayaquil October 4 to November 8, 5 deaths
Hamburg November 2 to 9 1 case
Glasgow November 2 to 9, 6 cases
London November 2 to 9, 1 death
Madrid October 29 to November 5, 4 deaths
Marseilles November 21, smallpox epidemic
Montevideo October 12 to 19, 3 cases
Nogales November 9 to 16, 1 case
Odessa October 26 to November 2, 5 cases, 2 deaths
Pernambuco September 28 to October 12, 300 cases, 81 deaths
Prague October 19 to November 2, 5 cases
Rio de Janeiro October 12 to 19, 69 deaths
Rotterdam November 2 to 9, 2 cases
St Petersburg October 25 to November 2, 7 cases, 2 deaths
Tuxpan November 2 to 9, 1 death
Warsaw October 26 to November 2, 1 death

CHOLERA

Bombay October 15 to 29, 4 deaths
Calcutta September 28 to October 19 86 deaths
Egypt To November 9, 658 cases 496 deaths
Osaka and Hiogo October 12 to 19, 6 cases, 3 deaths
Tangier October 1 to 31, 1000 cases, 800 deaths

YELLOW FEVER

Cienfuegos November 10 to 17, 3 deaths

Guayaquil October 4 to November 8, 3 deaths
Perambuco * September 28 to October 12, 30 cases, 3 deaths
NOTE —The U S. Consul at Pernambuco, Brazil, writes that there is "more fever than has been known during the past twenty years"

NECROLOGY

RICHMOND LENNOX, M D , of Brooklyn, 34 years old, a specialist in diseases of the eye, died November 14 He was a graduate of the New York College of Physicians and Surgeons in the class of 1882 He was surgeon to the Brooklyn Eye and Ear Hospital, and also to the Kings County Hospital He was a member of the New York Ophthalmological Society and the Kings County Medical Society He was a member of the Hamilton, Lincoln, Carlton, Crescent and Whist Clubs He leaves a widow and two children The cause of his death was immediately due to cerebral embolism, occurring about twelve hours prior to his decease, he had for twelve years been the subject of chronic endocarditis

W HERBERT DUNLAP, M D , of Syracuse, N Y , November 11 He was born in that city in 1853, and was graduated from the Syracuse University in 1875 He received his degree in medicine from that institution three years later He had made a specialty of dermatology for the last ten years

JACOB MENDEL, M D , age 50, died November 12 He was graduated at Breslau, Germany For the last twenty-three years he had practiced in Milwaukee and was noted for his scholarly attainments His last illness was of short duration

——A J Freeman, M D , of Macon, Mo , November 23——Henry B Callahan, M D , of Leavenworth, Kan , November 23, aged 74——J E Chambers, M D , of Chicago, November 24, aged 35——Thomas Flournoy, M D , of Richmond, Va , November 20——Davis M Hammond, M D , of Evansville, Ind , November 18, aged 42——D F Lindsay, M D , of Noblesville, Ind , November 21, aged 77

MISCELLANY

Dr C F Scott, the State Veterinarian of Wisconsin, says that when the golden-rod is eaten by horses, it produces a fatal disease simulating tuberculosis

The Post-Card Dun —The *Cincinnati Medical Journal* reports that "Dr J W Morgan, of Cadiz, Ohio, has been arrested for having sent a dun to a former patient written on a postal card"

The American Journal of Surgery and Gynecology has been removed to St Louis, from which place the December number (vol VIII, No 1) is just issued Dr Emory Lanphear, Professor of Surgery in the Woman's Medical College, has been appointed editor in chief

The Committee of the Pasteur Institute has unanimously chosen M Duclaux, former subdirector, to succeed M Pasteur as director, and Dr Roux as subdirector of the Institute M Duclaux, who is a professor at the Sorbonne, has been connected with the Pasteur Institute since its foundation

Population of Japan —The Department of State has received advices from Japan stating that the population of that country is estimated to be 42,000,000, plus 3,000,000 for the newly added territory of Formosa Records of the population of Japan have been kept from the time of the seventh century, in 610, A D , the number was recorded as 4,988,842

Professor Koenig —It is now definitely announced that Koenig is to be called from Göttingen to fill the vacancy in Berlin caused by the death of Bardeleben Koenig is now 64 years of age, one of the most distinguished leaders of scientific surgery of the present, and widely known through his text-books on general and special surgery —*Deutsche Medicinische Wochenschrift*, Oct 31, 1895

New Method for Differentiating Antifebrin, Phenacetin, and Antipyrin —For this purpose warm a small quantity of the powder to be examined in a test tube with a small quantity of chlorid of zinc Antifebrin thus treated gives out aromatic vapors, phenacetin, a sharp odor, resembling that of acetic acid, antipyrin, one resembling that of sulphid of carbon —*Nouveaux Remedies* from *Pharm Zing* , No 63, 1895

Medical College Recognized —The Connecticut law concerning the practice of dentistry has been amended by the insertion of the words "or medical college," placing the holder of a diploma or other certificate of honorable graduation from a medical college having a department in dentistry, on the same footing with the holder of such document from a reputable dental college

Madame (Doctor) Chellier —The French journals state that Madame (Doctor) Chellier of Algiers, North Africa, has been appointed by the Governor of Algeria to make a special investigation in the outlying province She is to visit villages, study the condition of the Arab and Kabyle women, among whom no male physicians are permitted by Mussulman law, and introduce such measures as will alleviate their sufferings

A Butcher Became a Surgeon —An agent of the New York County Medical Society has made a case against "Dr" Adolph Grundman, who came to this country two years ago and established himself as a butcher Later he went into partnership with a registered physician A female detective, also an agent of the County Medical Society, says that Grundman prescribed for her He has been held for trial in a police court charged with practicing medicine illegally

Chlorin in Typhoid Fever —Dr R W Wilcox (*American Journal Medical Sciences*, September, 1895) in an interesting article on the use of chlorin in typhoid fever, after describing the method of preparation gives his conclusions as follows -

1 Chlorin can be safely administered until complete disinfection of the alimentary canal is obtained

2 Under its use the tongue becomes cleaner, the appetite and digestion better, fever lower, and the stools devoid of odor

3 The general strength, the intellectual processes, and nervous conditions improve

5 The disease is shortened in duration, and usually proceeds to rapid and complete recovery

Can Demand Services of State Veterinary Surgeon —The State Board of Health, it has been provided in Missouri, may demand of the Secretary of the State Board of Agriculture, through their President and Secretary, the services of the State Veterinary Surgeon to aid them in the inspection of such infectious or contagious diseases in live stock as are transmissible to the human family, and in the examination of meats, milk and foods, when in the judgment of said State Board of Health the assistance of this officer is necessary

Staff Surgeon Steuder of the German Army has had a considerable experience with African bilious fever According to *Illustrated Africa*, he has found that this fever seldom attacks men on the march or engaged in hard work, but seizes them when they are at rest By examining the blood the fever may be detected before it declares itself, as the deficiency of hemoglobin is marked, and may then be readily cured on the spot If too much hemoglobin is lost, the only thing to be done is to send the patient to Europe or some healthy climate In one case he made a cure by the transfusion of healthy blood into the patient's veins

A Medical Explanation —From *The Watchman* "Doctor" said an old lady the other day to her family physician, ' can you tell me how it is that some folks are born dumb?" "Why hem, certainly, madam," replied the doctor "It is owing to the fact that they come into the world without the power of speech" "Dear me!" remarked the old lady, "now just see what it is to have a medical education! I've asked my husband more than a hundred times the same thing, and all that I could get out of him was, 'because they are'"

New York State Association of Railway Surgeons —This Association held a convention at the New York Academy of Medicine on November 12 under the presidency of Dr R S Harnden of Waverly The subject of the presidential address was the establishment of hospitals by the railway corporations and their employes, acting jointly An election of officers for the year 1895–96 resulted as follows President C S Parkhill, of the Erie Railroad, First Vice President, I F Valentine of the Long Island Railroad, Second Vice-President, J K Stockwell of the Ontario and Western, Secretary, C B Herrick of the Delaware and Hudson Railroad, Treasurer, Theodore S Mills of the Ontario and Western, Chairman of the Executive Board, Dr George Chaffee

Wooden Diagnosis With Up to Date Therapeutics —Certain medical men of London are said by *Popular Science* to be backing up the following doubtful expedient for the repression of the patent medicine business Certain wooden figures have been put up on the nickel in the-slot principle The figures are shaped like a man, with holes in every part of the body labeled with the diseases that usually affect that part For headache you find the proper slot so labeled in the head of the figure, and drop in a penny, out comes an inexpensive but efficient prescription that can be filled by any druggist These prescriptions are said to be gotten up by prominent doctors and are very good and useful One object of this device is to make medicine cheaper to the poor and restrict the use of dangerous proprietary mixtures The notice reads more like a bit of journalistic enterprise than a fact

Change in Arizona Dentistry Law —The law regulating the practice of denistry in Arizona has been amended, requiring those who wish to engage therein to furnish satisfactory proof that he or she has two years of practical experience in the practice of dentistry And any applicant, it is further provided, presenting a diploma from a reputable dental college and a fee of $5, not returnable, may be granted by one or more members of the board, upon approval of the president, a temporary license to practice dentistry in the Territory until the next meeting of the board, at which time it shall issue to the applicant, providing the applicant shall have furnished satisfactory proof that said diploma was issued in good faith, to him or her, a practitioner's certificate entitling the applicant to practice dentistry in Arizona The proceedings of the board shall at all times, instead of at all 'reasonable" times, as heretofore, be open to public inspection

Dr Edward Berdoe, a practitioner of London, has written in the *Nineteenth Century* an article on the miracles at Lourdes, to which place he went in the attitude of a reverend skeptic He saw a vast army of paralytics and consumptives, idiots, the lame and blind. The supplicants at the grotto kneel for hours with arms outstretched, wrapped in devotion, and often in ecstacy The spirit of devotion is intense, it exalts the whole organism and serves of itself to explain much of the thaumaturgy That wonderful effects are wrought at Lourdes is unquestionable Purely dynamic diseases are cured, but not organic maladies Ulcers and tumors may be caused to disappear, if such lesions be of the same nature as paralysis and other disorders of motion and sensation, which are commonly considered to be the sole field for the influence of the faith cure Dr Berdoe believes that similar cures have been wrought in all ages, and quotes Greek tablets testifying to wonderful cures of blindness through the agency of the gods

Electrolytic Chlorate of Potash by the Ton —The *Chemist and Druggist* has an article on the progress made in Europe in the electrolytic manufacture of chemicals, in which is conveyed the prediction that the United States will take the lead in the alkali industry of the coming decade Hitherto the only important chemical that has been produced by electrolysis has been the chlorate of potash, but it can not be long before other substances will be made by that process The basis of the remarks of the journal above referred to has been a report by a French chemist, a part of which is given below

In *Le Moniteur des Produits Chimiques*, M Désiré Korda gives a sketch of the application of electricity to chemic manufacturing processes, referring particularly to the manufacture in Sweden and Switzerland of chlorate of potash, which, so far, is the only important alkali product made by electrolysis M Korda thinks that it is only a question of a few years before the entire alkali industry will be revolutionized The United States, he believes will then become the leading manufacturers of chemicals, while in Europe the industry will have its chief centers in Switzerland, Southern France, and Sweden—the countries where powerful and cheap water power are in close proximity to large consuming markets The Swiss chlorate of potash factory has been at work for nearly five years, the motive power being a waterfall 70 meters high As yet, of the total yearly European output of about 8,000 tons of chlorate of potash, over 5 000 tons are contributed by the United Alkali Company The electrolytic process in use in Switzerland is based upon Gall and Montlaur's process in which concentrated solution of chlorid of potash is decomposed in a double vat, divided by a diaphragm, but so connected to insure regular changing of the liquid from the negative to the positive compartments The electrolized solution is heated from 45 to 55 degrees C, thus changing hypochlorite into chlorate The cathode is of iron or nickel, the anode of platinum or of iridio-platinum The current is equal to 50 amperes per square decimeter of electrode

The Pineal Body —In *Popular Science News* for October, Anna Hinrichs presents an illustrated article on the comparative anatomy of the pineal body Her thesis is, that this body or "gland," is the rudimentary third eye of man and all vertebrates The central point of our brain, which so long has remained a mystery to the student of human and comparative anatomy, now appears as the rudiment of a third eye, overgrown and depressed by the immense development of the brain In other words, at the expense of a third eye man has secured his brain, the organ of intellection This discovery is not only very interesting, but also remarkably instructive, since this rudimentary third eye of man was looked upon by Descartes as being the seat of the soul

"In closely examining the skulls of certain lizards, it was found that near the top of the head under the dark opaque skin, and often in the very bone an almost perfect eye exists, though no ray of light ever could reach it Such an eye is represented in the upper figure of this cut This eye shows a crystalline lens, a retina of very complex structure, and an optic nerve, in fact, all the essential parts of a perfect eye But being covered by the opaque skin of the animal, it is absolutely useless If this optic nerve is traced to the brain, it is found to connect the eye with the so called pineal gland of the brain This pineal gland is in no sense of the word a real gland, but a definite portion of the nervous tissue of the brain, invariably located just back and partly over the cerebrum, and in front of the rounded brain mass which generally is considered to correspond to the corpora quadrigemina in man"

It is probable that this third eye was, at an earlier stage of development, not rudimentary but in constant use A moderate modification—namely, a transparent integument—would suffice, this is exactly the condition of the normal eyes in reptiles to-day, the skin covers them, but it is transparent where it passes over the eye In the skulls of some of the gigantic reptiles of the earlier age of this globe, paleontologists have long ago found a large round perforation Probably this was the socket of the third or pineal eye of the ichthyosaurus, the plesiosaurus and the labyrinthodon But a much more important conclusion must be drawn from this discovery, namely, that in all vertebrates, even including man, the traces of this third eye remain to this day The pineal eye of lizards being connected with the large pineal gland of the same, it would seem that the pineal gland itself is but the nerve center or optic thalamus for this third eye In all reptiles and amphibia, the pineal gland is large, so it is also in fishes In the higher vertebrates, the cerebrum developes very highly, overgrowing the posterior portions, under the influence of which preponderance of the cerebral mass, the pineal body is more and more repressed into rudimentary forms But it remains with obstinate pertinacity It is even always present in man—though here only of the size of a pea and rudely resembling a pine cone in shape It seems also degenerate in structure, having hardly any nervous tissue These facts of form and structure have given rise to its name, that of pineal gland The position of the pineal gland in man is almost in the very center of the brain The pea-like, rounded mass attracts attention when the third ventricle of the brain is opened It is almost free, being held in place by two light, stalk-like bands or peduncles which connect it to the cerebrum anteriorly The gland, so called, is rather vascular, and contains also crystalline mineral matter, the so-called *acervulus cerebri*, consisting mainly of phosphates

Society Notes

North Texas Medical Association—The semi-annual meeting of the North Texas Medical Association will be held in Greenville December 10, 11 and 12 There are nearly forty papers on the program, and an instructive meeting is expected

The Chicago Gynecological Society, November 22, had an open meeting Dr Wathen, of Louisville, was an invited guest

Grayson County Medical Society—The following preamble and resolutions were unanimously adopted by the Grayson County Medical Society at its regular meeting held in Sherman, Texas, November 5

(Signed) J H Glasscock, M D, President
T M Taylor, Secretary

DEPARTMENT OF PUBLIC HEALTH

Whereas, This Society believes that a Department of Public Health under control of a Secretary who should be a *member of the Cabinet* of the President of the United States, is necessary to the welfare of this country, therefore be it

Resolved, That this Society indorses the bill now pending to establish such Public Health Department, and requests our members of Congress to support said bill and aid in its passage

Resolved, That the Secretary be requested to transmit a copy of the foregoing preamble and resolutions to our Senators and Representatives in Congress

Resolved, That this preamble and resolutions be spread upon the minutes of the Society

Hospital Notes

Bequests for Hospital Purposes at Newark, N J—The will of Mrs Anna Skinkle, daughter of the late Jacob Skinkle, leaves $3,000 to the Orange Memorial Hospital for the endowment of a child's bed in memory of her deceased son, William Skinkle Allen She gave to her husband one-half of the residue of her estate, and provided that under certain conditions, the remaining one-half of her residuary estate should be used for the foundation of a general hospital for sick and infirm persons It is to be located in or near Newark, is to be forever under Protestant control, and is to have connected with it a chapel for religious services, but such services are to be of an undenominational character To provide against any miscarriage of her wishes in the hospital matter, Mrs Allen says in her will that if for any legal or other reason the gift for a hospital, as made by her, is declared invalid, she gives it (one half of her residuary estate) "to the Mayor and Common Council of Newark for the erection of a wing or annex to the City Hospital, the same to be known as the Skinkle Memorial Annex'"

The Day-Kimball Hospital at Putnam, Conn, was dedicated November 10——St, Anthony's Hospital at Rock *Island, Ill, was dedicated and formally* opened November 19——The committee appointed by the last Iowa Legislature to adopt plans and erect a hospital for the insane at Cherokee held a meeting in Des Moines November 20 and adopted plans for the institution which will cost $1,000,000——*The twenty seventh* anniversary of the New York Presbyterian Hospital was celebrated November 16 The annual report showed the expenses of the *hospital during the* year were $165,692 12 and the receipts from patients were $29,534 61 Donations were received amounting to $12,099 30, while the income from investments amounted to $27,857 29——The Junior Society of Mount Sinai Hospital, New York, has been *organized* and promises to be one of the leading charitable societies of that city——The Ladies' Aid Association, of St Mary's Hospital, Brooklyn N Y, held a promenade concert *and reception November 27*——The Woman's Board of Governors of the Orange *Memorial* Hospital will erect an isolated ward for consumptives——It is alleged that owing to difficulties that have arisen between the Board of Trustees and the medical staff of the Phœnixville, Pa, Hospital, the latter have resigned in a body——The Silver Cross Hospital at Joliet was opened November 16

Detroit Notes

Dr S L Wyszynski—A fatal accident happened at the Buchanan St crossing of the Michigan Central Railroad, about 5 o'clock on the evening of the 21st inst, resulting in the death of Dr S L Wyszynski, one of the leading physicians of the Polish district of Detroit The deceased was born in 1854 *in a province of* Russian-Poland, and was educated as a physician at Academies at Warsaw and St Petersburg Four years ago, after having served fifteen years in the Russian Army, he came to America and located in Chicago, practiced there two years, and then moved to Detroit, where he continued a very successful professional career up to the day of his death A wife and four daughters survive him, two of the daughters being at home and two in Russia, the eldest one, Mrs Wanra Nicholi, being the wife of a lieutenant in the Russian Army

Wayne County Medical Society at its regular meeting Thursday, November 21, listened to a very interesting paper by Dr Dayton Parker on "Diphtheria"

The Detroit Medical and Library Association listened to a paper by *Dr F Pettyjohn* of *Alma*, Mich, entitled, "Notes on Differential Diagnosis and the Treatment of Neurasthenia," at its meeting of *November 18*

The Academy of Medicine at its meeting November 5, heard a paper from *Dr Hal C* Wyman on "Fractures of the Neck of the Femur"

Health Office Report for week ending November 23 deaths, under 5 years, 25, total 92 Births, male 47, female 35, total 82 Contagious diseases week ending November 23 diphtheria last report 25, new cases 27, recovered 10, died 8, now sick, 34 Scarlet fever, last report 13, new cases 6, recovered 4, died none, now sick 15 Smallpox, last recovered 3, new cases none, recovered none, died one, now sick 2, also one case from Hamtramck, and one from Rochester, Mich, were taken to the smallpox hospital

Philadelphia Notes

The Jefferson Medical College has purchased an adjoining property at Tenth and Medical Streets, and will in the course of next year open a laboratory building, five stories in height, fitted up with all the modern apparatus for technical teaching in physiology, bacteriology and pathology The first floor is to be used for dispensary work

The Medico-Chirurgical College has purchased the adjoining properties on Cherry Street down to the corner of 17th Street, so that its buildings when completed (including the College Hall, the Hospital and Maternity) will extend an entire square from 17th to 18th, on Cherry Street

A new clinical amphitheater is in course of erection on the premises of the hospital An amicable adjustment of strained relations has been made with the Philadelphia Dental College Both schools have used the lecture halls conjointly and carried on their dispensary service in the same building, for several years, but the classes have now grown too large for this arrangement to continue, and after next term the Medico Chirurgical will dissolve the arrangement and will occupy the premises alone, the Dental College seeking quarters elsewhere Dr J C Bonning has been elected Professor of Anatomy and Surgery in the Philadel phia Dental College, succeeding to Dr Garretson's chair

Free Lectures on Bacteriology —A course of five weekly lectures, on Saturday afternoons at 3 o'clock, was begun at the Academy of Natural Sciences last week, (November 16) by Dr M V Ball

The City Bacteriological Laboratory —A protest has been made against the continuance of the bacteriologic department in its present location on the seventh floor of the City Hall Members of Council and others in fact wish to have the entire Health Department removed to a separate building so that they may not come in contact with medical inspectors in the elevators and lobbies It is asserted that the bacteriologic laboratory is much visited by the public, and visitors are shown guinea pigs and rabbits and "such small deer," in all stages of fatal infection with diphtheria, anthrax and other zymotic and contagious diseases There seems to be an inconsistency in the health authorities placing human beings under so-called quarantine at their own homes, on account of a child which is affected by these disorders, and on the other hand indiscriminately inviting visitors to the laboratory, where the Klebs Löfller bacillus is doing its deadly work on a score of inferior animals, which in addition to being made to suffer for the cause of science are also permitted to gratify a very unscientific curiosity

Polyclinic Hospital and School for Graduates —Dr A Larue Vansant has been elected Professor of Laryngology, and Dr James K Young Professor of Orthopedic Surgery in this school

The Trustees of the Woman's Medical College have appointed Dr James K Young Clinical Professor of Orthopedic Surgery

The Pepper Laboratory of Clinical Medicine connected with the Hospital of the University of Pennsylvania, 36th and Spruce Streets, will be formally opened Dec 4, 1895, at 3 o'clock, P M Addresses will be made by Drs J S Billings, Director of the University Hospital, and W H Welch of Johns Hopkins

Philadelphia Hospital —Dr Alfred C Wood was recently elected to succeed Dr Wm G Porter, on the medical staff of the hospital, the latter having resigned after nearly twenty-five years service Dr J Chalmers Da Costa was also elected to the surgical staff, thus increasing the number of surgeons to ten Dr Elizabeth L Peck was chosen to succeed Dr Clara Marshall on the obstetrical staff Dr Ernest B Sangree was made pathologist to the hospital

Municipal Authorities Supply Antitoxin —November 20 should be a red letter day in the Philadelphia Health Department, as it possibly marks a new era in medicine, for on that day the city of Philadelphia entered the lists among the manufacturers of medicine and distributed to the Municipal Hospital the first delivery of antitoxin, or diphtheria vaccine, of its own manufacture

A Colony Farm for Epileptics in Pennsylvania has been projected and a charter obtained from the courts Dr Wharton Sinkler, of Philadelphia, is the President of the Board of Directors It has been announced that a donation of $50,000 for building purposes has been promised, if a suitable site be obtained for a farm before the first of next January

Sohleich's Method of Local Infiltration and Anesthesia was recently brought before the Philadelphia County Medical Society by Prof Theophilus Parvin, and Dr Keen has done a laparotomy, a herniotomy and several other operations by this method, which is a substitute for general anesthesia in suitable cases Dr Morton and other surgeons also have operated successfully by local anesthesia

St Louis Notes

Mortuary Reports for the week ending November 23 deaths, 160, preceding week, 156, corresponding week of 1894, 148 Births reported, 233

Contagious Diseases —The Health Office reports for the week ending November 23 cases of diphtheria, 160, deaths, 20, cases of croup, 20, deaths 10, cases of typhoid, 11, deaths, 6, cases of measles, 10, cases of scarlatina, 12

The St Louis Medical Society —The scientific program on November 23 consisted of a paper on " A Phase of Traumatic Epilepsy," by ,Dr Frank R Fry, with discussions by several neurologists Dr Fry deprecated the common use of the word traumatic, as somewhat lacking in discrimination, and advocated the use of the term only in those cases of epilepsy where it could be shown that trauma had affected the brain directly or indirectly in a way to produce epilepsy His remarks were made anent two cases that had been reported as instances of traumatic epilepsy, in one of which the trauma had been a burn at the knee, and in the other a head injury, both of which had been cured by treatment of exciting foci outside of the brain itself, viz, treatment of the scar in one case and the removal of buttons of bone in the other

Dr A B Shaw in his discussion of the paper, emphasized the need there was of a constant reminder that epilepsy was merely a symptom, pointing out how various lesions of the brain might produce epileptoid manifestations He could not say that he was entirely in accord with the reader in his attempt to limit too sharply the use of the term traumatic, though he did not wish his position to be construed as opposing that taken by Dr Fry, since in his hearing of the paper he might have failed to gain a clear notion of the limitations Dr Fry advocated Dr C G Chaddock could see no reason why a case of epilepsy should not, for practical purposes, be called traumatic when its development could be shown to be related to an injury, no matter whether the trauma affected the brain directly or not If we were to reserve this qualifying word for only those cases of epilepsy in which injury to the brain could be demonstrated, it could be consistently used only where the brain had been actually examined, or where there were symptoms of focal lesions As the cases cited showed, it was well in any case to consider the possible operation of reflex influence even in those cases where the injury had been to the head As a suggestive allusion, reference was made to the possible path to the cortex of an irritative excitation of the dura, viz, through the peripheral neurons of the trifacial and the vagus A rather close relation of the fifth nerve to the vagal nucleus was assumed through its descending roots, and the proximity of the vagal nucleus to the convulsive area in the medulla was pointed out Was there any relation between this area and the vagal nucleus and cortex that could be of influence in the production of convulsive seizures? Though Binswanger had not produced epileptic convulsions by irritation of this area, tetanoid movements had thus been induced and at least its relation to the vagus was worthy of consideration in cases of epilepsy where a reflex through the trifacial or vagus was possibly in play The influence of predisposition to epilepsy in cases of a traumatic causation was emphasized, because there was seemingly an inclination to overlook it It was suggested that it was quite as influential in traumatic cases as in other varieties of epilepsy and this could not be ignored until a lesion that would invariably induce epileptic seizures had been demonstrated It would be interesting to know whether the findings in the urine and blood that had been demonstrated for so-called idiopathic epilepsy would hold good for epilepsy due to gross brain lesions The necessity to remember that general causes, such as a toxin in the blood, might induce Jacksonian seizures, was pointed out, for neglect of this might lead to an error in diagnosis Dr G C Crandall likewise laid stress upon the element of predisposition in epilepsy, no matter what the exciting cause, and he pointed out the bearing other signs and symptoms of a general neurosis might have upon the prognosis of operative procedures for the cure of convulsive seizures Dr Ludwig Bremer alluded to the findings of sclerosis of cortical and subjacent nervous tissue which he had been able to demonstrate in the few epileptic brains he had examined He emphasized the relation of epilepsy and hysteria, recalling the fact that it is often impossible to make a differential diagnosis between true epilepsy and hysterical seizures He was inclined to question whether there was not an hysterical element in so called reflex epilepsy Dr Keating Bauduy instanced several interesting cases of reflex epilepsy, mainly of genital origin, which rather pointed to an hysterical factor The general discussion was concluded by remarks from Drs Funkhouser and Jacobson

Washington Notes

HEALTH OF THE DISTRICT—From the report of the Health Officer for the week ended November 16, is taken the following abstract the general health of the city underwent a material improvement last week From 121 in the week previous, the mortality fell to 99, and the annual death rate per 1,000 inhabitants correspondingly declined from 22 8 to 18 6 There was no death reported by diphtheria, scarlet fever, measles or whooping cough There were 7 deaths from typhoid fever as compared with 8 by the last report, while those from consumption were over 50 and from other lung maladies 20 per cent less The birth returns amounted to 72, and those of marriages to 79, of which 44 were between white and 35 between colored persons

MEDICAL SOCIETY OF THE DISTRICT—At the meeting of the Medical Society held on the 20th inst, Dr H W Beatty reported a very interesting fatal case of dermatitis exfoliativa which was discussed by Dr B F McGuire Dr Behrend reported a fatal case of rabies in a lady patient, and Dr D E Salmon read a paper on the prevalence of rabies in the District of Columbia Both subjects were discussed by Drs V A Moore, Walter Reed, Forwood, Chappell, Lovejoy, Schaeffer and others Dr Acker reported a case of endocarditis following chorea in a young child

REPORT OF COMMITTEE ON STEAM RAILROADS (BOARD OF TRADE)—The committee on steam railroads and public safety are making war on steam railroads and endeavoring to bring about certain changes in grade crossings which will protect human life and limb In their report to the Board they give the following recapitulation of the killed and wounded during the past four years

BALTIMORE AND POTOMAC RAILROAD

	Killed	Injured
1892	6	7
1893	10	7
1894	5	11
1895	5	11
Total	26	36

BALTIMORE AND OHIO RAILROAD

	Killed	Injured
1892	6	5
1893	7	7
1894	1	6
1895	0	1
Total	14	19

Killed, 40 injured, 55, total 95

LETTER TO A WASHINGTON PHYSICIAN—The following letter bearing the stamp of the U S Senate, was received a few days ago by a prominent Washington physician

Dear Doctor—I enclose cheque for $—— This I fear (my memory being shy) still leaves a balance But then it is singularly appropriate that I should have a running account with you, inasmuch as it was always on account of a running that I called to see you Did you laugh? You get a cigar Confidentially, it takes a —— good natured man to joke about a doctor's bill Any man who can descend to that, would laugh while his teeth were being pulled

"Yours very truly, ——"

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S Army, from November 16, 1895 to November 22 1895

Major Joseph K Corson, Surgeon, leave of absence granted is extended twenty days, on surgeon's certificate of disability

Capt George McCreery, Asst Surgeon, is granted leave of absence for four months to take effect about Dec 10 1895

First Lieut Irving Wallace Rand, Asst Surgeon will report in person without delay to the President of the Army Medical School, for the course of instruction prescribed in General Order No 78 Sept 22, 1895 from Adjutant General's Office

APPOINTMENTS

To be Asst Surgeons with the rank of First Lieuts Nov 15 1895 Thomas Jellis Kirkpatrick Jr, John Hamilton Stone, Irving Wallace Rand

Powell Conrad Fauntleroy, to be Asst Surgeon with rank of First Lieut, Nov 15, 1895

RETIREMENT

Lieut Col Joseph R Gibson Deputy Surgeon General, retired from active service Nov 15, 1895, on account of disability incident to the service

PROMOTIONS

Major Justus M Brown Surgeon to be Deputy Surgeon General with the rank of Lieut Col, Nov 15 1895

Capt Daniel M Appel, Asst Surgeon, to be Surgeon with the rank of Major, Nov 15, 1895

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending November 23, 1895

Medical Director P S Wales, ordered to duty as member of retiring board, Washington, November 25, in addition to his present duties

P A Surgeon R P Crandall, detached from the naval laboratory, and ordered to the naval hospital New York

P A Surgeon Philip Leach, detached from the naval hospital, and ordered to the naval laboratory, New York

Marine Hospital Changes Official list of changes of station and duties of Medical Officers of the U S Marine Hospital Service, for the fifteen days ended November 15, 1895

Surgeon C S D Fessenden, ordered to proceed from Salem to Boston Mass, for physical examination, Nov 14, 1895

P A Surgeon D A Carmichael relieved from duty at St Louis Mo, and directed to proceed to Vineyard Haven, Mass, and assume command of Service, Nov 1 1895

P A Surgeon S D Brooks relieved from duty at Chicago Ill, and directed to proceed to St Louis Mo, and assume command of Service, Nov 5, 1895

P A Surgeon J H White, granted leave of absence for twenty three days Nov 5, 1895

P A Surgeon T B Perry, granted leave of absence for thirty days, Nov 11 1895

P A Surgeon J O Cobb to proceed from Pt Townsend to Port Angeles Wash as quarantine inspector Nov 1 1895

P A Surgeon J B Stoner to proceed from Detroit, Mich, to Baltimore, Md, for temporary duty, Nov 1, 1895

Asst Surgeon C H Gardner to proceed from San Francisco, Cal, to Chicago, Ill for duty, Nov 5, 1895

Asst Surgeon Norman Seaton, to proceed from Baltimore, Md, to New Orleans, La, for duty, Nov 1, 1895

Asst. Surgeon A R Thomas, to assume temporary command of Service at St Louis Mo, Nov 1, 1895

Asst Surgeon J B Greene, to proceed from Vineyard Haven, Mass, to Baltimore, Md, for duty, Nov 1, 1895

Change of Address

Beckett, J, from 879 Lake St to 283 Park Ave, Chicago
Carmichael, D A from St Louis, Mo to Vineyard Haven Mass
Caldwell J R from New Hamburg to Greenville, Pa
Dunbar, L L, from 500 Sutter St to 606 Sutter St, San Francisco, Cal
Gardner Mathew, from Sacramento to Southern Pacific Hospital Association, San Francisco, Cal
Miller R E from 3100 State St, to 3255 State St, Chicago
McIntyre, J H, from 623 Locust St to 710 Olive St St Louis Mo
Norbury F P from Jacksonville, Ill, to 1006 Olive St St Louis Mo
Penny H T, from Baltimore, Md to 1016 10th St, Washington, D C
Sharpe W F, from 500 Sutter St to 606 Sutter St, San Francisco, Cal

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LETTERS RECEIVED

Ayres H B (2) Indianapolis, Ind

Barrett Joseph E Wooster Ohio, Busey, S C, Washington, D C Bacon M W Chicago Ill

Carmichael, D A Vineyard Haven Mass, Cone, Andrew New York, N Y Cochran, Jerome Montgomery, Ala Carstens, J H, Detroit, Mich

Dodd F B, Waucoma, Iowa Dougan, Peter New York, N Y Darr H H, Caldwell Texas

Eastman Joseph, Indianapolis Ind

French Pinckney St Louis Mo

Gihon Albert, New York N Y

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Smart, Chas Washington, D C, Schering & Glatz, New York, N Y, Schimmel M S Baltimore Md

Truitt U L, Chicago Ill Turnbull Laurence Philadelphia, Pa Tabb, W R & Co, New York, N Y Thomas, D R, Tennille, Ga

Van Horn A K, Jerseyville Ill

White, Frank, (2) Elwyn, Pa Willard, De Forrest, Philadelphia, Pa, Western Pennsylvania Medical College, Pittsburg, Pa Wire, G E, Chicago, Ill., Würdemann, H V, Milwaukee, Wis

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ORIGINAL ARTICLES

ŒSOPHAGEAL STRICTURE AND ITS SUCCESSFUL TREATMENT BY ELECTROLYSIS AFTER FORTY YEARS STANDING

Read in the Section on Neurology and Medical Jurisprudence at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY W S WATSON, M D
(RIVERVIEW HOME SANATARIUM) FISHKILL-ON HUDSON, N Y

The symptoms of esophageal stricture are pretty generally known to the profession, the symptoms may and very often do exist for some time before the patient or the medical attendant realizes the gravity of the existing condition, they begin with difficulty in swallowing solids, especially meats, and when eating hurriedly, the trouble increases from day to day until only liquids can be swallowed with great difficulty After the stricture has existed for some time, the space above the point of stricture becomes dilated in the effort to swallow or retain food, and often the patient is led to believe that he has swallowed food when it will suddenly return If the stricture be low down, the food will remain much longer than if high up, persons suffering from esophageal stricture are always lean and emaciated The health gradually declines

In diagnosis of stricture of the esophagus, great care should be taken to determine the cause, for, if cancerous, no treatment can do much for the sufferer, hence in giving a prognosis we should know that we are not dealing with a cancerous obstruction

A stricture differs from a spasmatic closure, one taking months and sometimes years to develop so as to interfere greatly with the swallowing, while the other, the spasmatic, comes suddenly and disappears in like manner In the spasmatic form anti spasmatics relieve, in the other, medication does no good, in the spasmatic closure of the esophagus, a bougie passes to the stomach with but little or no resistance, if it does meet with any resistance, moderate pressure soon overcomes that resistance, with a fibrous or cicatricial stricture it is not so The bougie can with great difficulty be passed, if at all, paralysis will impede the swallowing and food may become lodged for want of power to swallow and be regurgitated, the passage of an ordinary bougie will readily determine this, in cancerous obstructions, the passage of a small bougie determines the fact by blood being upon the returned bougie and upon food regurgitated Once satisfied that we have a stricture to deal with, a cure may be assured, the patient being determined and having a reasonable amount of strength to endure a course of electrical treatment, which is not without some pain, a cure requiring from two to six months' treatment by electrical dilators once or twice a week

In the treatment it is necessary to have a good reliable galvanic apparatus with an evenly graduated rheostat and milliampèremeter, six or eight olive-shaped bulbs of as many different sizes, beginning with a three eight inch and increases two eighths each treatment, made preferably of aluminum and fitted with a deep screw thread to a copper wire that is covered with hard rubber insulation to protect the mouth and throat, shaft about sixteen inches in length, sufficiently *flexible to admit of some* bending, the better to enable one to follow the curves of the throat, yet sufficiently stiff to support some pressure, the bulbs or tips need be a perfect oval or olive, from the largest diameter in both directions, otherwise they are very difficult to withdraw and occasion unnecessary pain

Miss S, aged 62 years, had suffered from stricture of the esophagus since about 14 years of age, of a fibrous character, occasioned by a hard bit of apple becoming lodged in the throat and remaining there a considerable length of time, setting up inflammation and cicatricial formations at three different points, first just below the cricoid cartilage, another about one and a half or two inches lower, a third very low down Treatment was begun in September, 1894, using for exploration a small, somewhat flexible bougie which would not pass the first point of stricture The closure was so complete and had been for upward of twenty five years that it was impossible to swallow any kind of solids, and liquids were taken with the greatest difficulty, requiring frequently two or three hours to get enough down to sustain her The saliva would not take its natural course but was overflowing almost continually from the mouth, requiring the use of a handkerchief to absorb it every few minutes, I found it impossible to pass even the small flexible probe A small three eighths inch electrode was tried with the aid of 6 millimeters of current, attaching a small electrode to the negative side (here let me say that it is *highly important* that you be able to let on the current gradually to avoid the shock and fright), using a carefully devised rheostat (I find the Williams a most excellent one for the work), placing the pad, which is attached to the positive cord, to the back of the neck

Pass the bulb down to the first stricture, then have an assistant turn on the current gradually until 6 or 8 millimeters is reached, keeping up a moderate pressure for a few minutes, perhaps three to five, when the bulb is sure to pass A greater amount of current would probably pass the bulb through the stricture sooner, but it would be at the expense of tissue, by reason of the destructive character of a strong current when attached to the negative pole It is highly important that a dilating bulb be attached to the negative side, since it is the negative pole that softens by chemic action all tissues in contact, hence it is the one to absorb cicatricial formations and certainly has a salutary effect in cases of cicatricial strictures Treatment was given once a week for a period of six weeks At the second visit I succeeded in passing a three eighths-inch bulb through the three strictures, after which time the saliva did not overflow, nor were there any more spasmatic troubles when attempting to force down liquid foods, as had always or nearly always been the case At each treatment an eighth-inch larger sized bulb was used and passed, endeavoring at each sitting to pass through the strictures slowly, which was greatly interfered with on some occasions owing to the quite severe retching due to the bulb being passed down the throat We believe it highly important that a dilating electrode remain for some minutes in contact with the false tissues, in order that the electrical current may have time for action, the time in contact has all to do with the success of the treatment A rapidly passed electrical dilator is no great improvement over the old method of using dilators simply

After the sixth week, treatments were given twice a week, after the third month a one-inch bulb or electrode was passed, and I was informed by the patient, a few days after last Thanksgiving dinner, that she had enjoyed the first Thanksgiving dinner in upward of twenty-eight years She ate freely and without difficulty all semi-solids, even cake, pie and dressings, but no meats were tried, she being fearful of choking if she did Treatment was continued once in two weeks, continuing the one-inch electrode, and went no higher than 10 milliampères of current, five months from date of commencement of treatment she swallows with little or no difficulty, is still afraid of meat, but it could be taken with perfect safety, if well masticated We are unable to get the patient to continue the treatment longer, as she feels that her ability to swallow is good enough, however, we would prefer to continue the dilatation with the electrode for fully six months longer at greater intervals It is well to caution the patient as regards eating solids Abstaining from solid food has unaccustomed the stomach to such articles, so that serious stomach troubles may follow the indulgence of the ravenous appetite which is likely to follow such a long abstinence from solids

ELECTRO-THERAPEUTIC TECHNIQUE IN THE TREATMENT OF NEURASTHENIA AND NERVOUS PROSTRATION

Read in the Section on Neurology and Medical Jurisprudence, at the Forty sixth Annual Meeting of the American Medical Association, held at Baltimore Md, May 7 10 1895

BY G BETTON MASSEY, M D
PHILADELPHIA PA

The proximate purpose of electrical treatment in the group of conditions known as neurasthenia has been somewhat vaguely understood by different investigators, resulting in quite a variety of methods being employed Remembering the multiform phases of the affection itself, this is by no means strange, particularly when it is recalled that our knowledge of the pathologic processes underlying it is extremely imperfect and based mainly on deductions from therapeutic empiricism

Judging from published utterances and from the methods of treatment recommended, it is evident that most of the authorities agree with the original investigator, Beard, in regarding the disease as a perversion of function of the cerebro-spinal system of nerves Benedikt, Weir Mitchell and Rockwell, for instance, rely almost entirely on general faradic applications, apparently for tonic and revulsive effects, while Morton, Vigoroux and others employ static applications The currents used by them expend their force on the external moist layers of tissue, having insufficient density for effective penetration to deeper structures, and hence the therapeutic results must be due mainly to their action on the cerebro-spinal nerves and voluntary muscles

While it is likely that the Beard hypothesis of the nervous origin of neurasthenia adequately explains the secondary mechanism of these pathologic nerve fatigues, it is not so clear that the initial pathologic conditions arise in the cerebro-spinal system in any cases except those suddenly following mental shock or strain It is extremely probable that deficient innervation of the sympathetic system is a more important factor But whether primary or secondary, sympathetic nervous insufficiency may be constructively regarded as present in the majority of cases, accompanied by functional derangement of the organs that maintain a pure and healthful condition of the blood Flowing from this, come auto-intoxications, abnormal organic sensitiveness, etc

It is by no means denied that faradic currents may not produce effective results of therapeutic value on central organs and nerve structures, but it is clearly evident to the physicist that a sufficient density of either current can not be conveyed to them from the small electrodes and imperfect skin contacts still incorrectly employed by many neurologists in percutaneous applications of electricity The inch and inch-and-a-half disk electrodes are intended for localizing the current near the periphery, and are therefore properly employed in picking out and exercising groups of muscles in the limbs and trunk, but they are totally inadequate to convey any effective currents into organs situated in the cavities of the body

To reach and remedy these primary and secondary inactivities and pathologic fatigues of the abdominal nervous system, we need currents of volume and penetration, preferably galvanic currents, and that they may be carried painlessly to these deep-seated structures, large conducting pads must be used Fifty to 80 milliampères may be an ordinary application with such pads, and considering the rapid diffusion of the lines of current beneath the electrode, nothing less is likely to convey a sufficient density to the points desired By the large pads we are also enabled to use the most effectively stimulant faradic current, the primary, the large conducting surfaces minimizing the resistance to a point enabling low pressure and large volume inductions to be transmitted through the skin The method is monopolar, the indifferent electrode being applied to the back

An excellent form of electrode for both general and abdominal applications is made of brass wire sewn in a flat spiral to the upper surface of a piece of muslin The concentric turns of wire are about half an inch apart, the outermost turn ending in a free piece of wire which is coiled about a rheophore tip to make a friction attachment On the upper side of the muslin, and covering the wire, six layers of absorbent cotton are placed, covered with muslin or linen, the whole being then quilted through to make a compact pad The size of the indifferent pad should be about ten by fourteen inches The pad for the active pole is round and about seven inches in diameter When thoroughly moistened and with surfaces soaped, these electrodes furnish an ideal contact, so elastic as to fit any portion of the body surface, and when used for more than one patient they may be kept aseptic by daily immersion in boiling water

The maintenance of a thoroughly moist condition of the electrodes is an essential, in transmitting considerable currents through the skin with least resistance and pain, and if the active electrode, particularly, is kept well lathered with a soap like ivory soap, which I find to be the best lather-making soap on the market, as tested by comparative sensations under labile applications, the active electrode may be made to pass freely and almost painlessly over nerve points in a labile manner, evoking as full contractions of muscle groups as the faradic current, with added metabolic stimulation The same electrode is used for producing muscular contraction in the limbs and for abdominal applications, its exteme elasticity permitting a proper contact with the limb surface without the whole pad touching

The various procedures in general galvanic stimulation are as follows the patient, having disrobed, lies upon a blanket or sheet, both ends of which can be folded over the person The indifferent pad, lying on a piece of water proof sheeting, is placed under the small of the back and connected with the positive pole of the battery The active electrode, connected with the negative pole, is first placed on the abdomen, a lather is raised by moving it about, and 10 or 50 milliampères turned on through the controller Slow movements are made in the direction of the colon for several minutes, when the galvanic current is turned off and a primary faradic current turned on, also through the controller, and the same movements kept up for an equal time The arms and legs next require attention in regular order with the galvanic current, the active pad being placed in contact with the limb before turning the current on at the controller (and kept in contact until the limb has been finished and the current turned off) from 15 to 30 milliampères being enough to produce contractions if the pads be passed quickly over the nerve points

The immediate effect of this treatment varies with the condition of the patient If the case be one of great prostration it is advisable to have him or her rest awhile afterward until reaction has occurred, as there is apt to be increased weakness for a time in such cases, though even in these the exhilarating effect which always attends the treatment will follow in about an hour The extremities become warm and there is a sense of greater strength

Distinct effects upon the liver and kidneys can be traced to the treatment in many cases, the bowels become regular and the volume of urine greater It is also probable, though not yet demonstrated with precision, that these bulky currents produce functional stimulation of all the nerve centers and organs of the abdomen

1636 Walnut Street

ELECTRICITY IN THE TREATMENT OF EXOPHTHALMIC GOITRE

Read in the Section on Neurology and Medical Jurisprudence, at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY ROBERT NEWMAN, M D

CONSULTING SURGEON TO HACKENSACK AND BAYONNE HOSPITALS N J
GERMAN DISPENSARY WEST SIDE, NEW YORK CONSULTING
PHYSICIAN TO HOME YONKERS, N Y HONORARY
MEMBER ULSTER COUNTY MEDICAL SOCIETY ETC
NEW YORK

Much has been written on Basedow's disease or Graves, as exophthalmic goitre is often called Notwithstanding the large amount of literature on the subject since 1835, its etiology and pathology is not definitely understood or settled Most authors believe that it is a disease of the sympathetic system, having its origin in the cervical branch Treatment therefore has been more empirical and unsatisfactory The conclusion is, that exophthalmic goitre ends generally in death, usually caused by complications, of which a general nervous exhaustion and marasmus are prominent Recovery, however, may occur, even without treatment

While we have on record, reports of cures, the treatment by therapeutic means has not been satisfactory It is conceded that some remedies, like iron and digitalis, have allayed symptoms, but they scarcely cured the disease The ground of therapeutics is so well covered in reports that this paper will not touch on it and will only consider the treatment by electricity, which has promised to do more than medicines Successes have been reported by different authors who have given applications in different ways, but most agree that galvanism is the proper selection to be used in the disease under consideration

Galvanization has been used by v Dusch, who, in one case, after many séances succeeded in lowering the pulse from 130 to 70, and reduced somewhat the exophthalmus

Eulenburg galvanized the cervical sympathicus with similar results in 1867, using the negative pole He also used galvano-puncture without any appreciable result

M Meyer[1] reported four cases and Chvostek, who is a pioneer in the observation of this disease, has given much labor, and reports thirteen cases with galvanism in the same manner These observers report improvements in all cases in which they used galvanism, but do not pronounce decided cures

A D Rockwell[3] has treated cases in a similar manner with galvanism to the sympathicus He applied the negative pole over the cilio spinal center above the seventh cervical vertebra, and the positive in the auriculo maxillary fossa, gradually drawing the positive along the inner border of the sterno cleido mastoid to its lower extremity The second step consists of removing the positive pole to the position occupied by the negative, and placing the latter over the solar plexus, using for a minute a greatly increased strength of current

Galvanization of the sympathicus has also been practiced by Neftel

Eichorst uses the negative pole high up in the neck and the positive pole between the scapulæ, a current of five to ten cells for two minutes Then he applies the positive pole upon the cervical spine, the negative over the sympathetic and pneumogastric upon each side for two minutes, from auriculo maxillary fossa down the inner edge of the sterno cleidomastoid to the clavicle

As the affection probably begins in the medulla, currents have been passed through the back of the head above the spine Transverse currents have been passed through the goitre Several friends tell me they have reduced the size of the goitre by placing both poles near the thyroid, but it is evident they ignored other symptoms of the disease

Erb has tried very mild currents to the eyes with an uncertainty of benefit

Ziemssen recommends strong galvanic currents, and at the same time contradicts his own advice by urging caution in their use

Hunter McGuire uses the following galvanic application Positive cup-shaped electrode containing iodin on cotton over the gland, and the negative pole on the back of the neck

Frank D Boyd,[4] of San Antonio, Texas, reports improvement of one case in which he used very judicious treatment of therapeutics and daily galvanic application, but does not state how the galvanism was applied

There are reports from Vizioli[5] in 1878

Needles in goitre by electro-puncture have been used by Duncan,[6] of Edinburgh, and others with unsatisfactory results It seems that all surgical applications of electricity as galvano-cautery, electrolysis, cataphoresis, as well as electro-puncture, have given no beneficial or curative results Even the cataphoresis of Adamkiewicz, an electric anesthetic by diffusion, has given slight and very temporary relief of neuralgia

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[1] M Meyer Berl Medic Gesellsch, 1871 73

[2] T Chvostek Wien Med Presse 1869 1875

[3] A. D Rockwell The electric treatment of exophthalmic goitre Trans AMER MED ASSOC Philadelphia, 1880 XXVI 177

[4] Frank D Boyd Report of a case of exophthalmic goitre, Medical Record N Y March 30 1895

[5] Vizioli Elettoterapia practica Morgagni Germajo, p 69, 1878

From these reports it seems that all operators gave particular attention to the sympathetic nerves, but differed in the selection of the poles to certain regions and the way of application Some placed the positive pole to a region where others used the negative pole Some applied the galvanism with the apparent intention to allay only one symptom of the disease, while there are several symptoms to be looked after

The writer has treated within the last two years three cases of Basedow's disease with apparent good results, which can be called *cured* All three patients were females

The first case was a very aggravated one, who was ten years under electric treatment by one of the best authorities and practitioners in electricity During those years, in which the life of the patient was despaired of, slow progress was made under very careful and judicious treatment After the treatment had been suspended during a sojourn in the country, symptoms grew worse, and then in the fall of 1893 the patient came under the writer's care It needed one year's treatment before the patient declared herself well, and she has remained so up to date

A detailed history of this case is annexed here, from notes and observations by the writer's assistant, as follows

Case 1—W C, age 40, single She had been under treatment for nearly ten years with an authority in electricity and nervous diseases During that time she improved considerably, but was not cured An interruption of treatment was due to a sojourn in the mountains, during which time a relapse took place In November, 1893, she came under Dr Newman's care She then had all the symptoms of exophthalmic goitre, was very anemic, nervous system was unstrung, a great uneasiness a general nervous prostration, insomnia, sometimes nausea, anxiety, bowels disordered, with dyspeptic symptoms and all symptoms of neurasthenia The heart action was irregular, pulse varying between 120 to 150, temperature 100 Emaciation prevailed with scarcely any appetite The thyroid gland was enlarged—the circumference of the neck being thirteen and one sixteenth inches The eyes protruded very much, which gave the expression of anxiety to her face The case was very aggravated, so that her relations were alarmed about her life Her family history is good, but her father had heart trouble and her mother, who is still alive, has always had symptoms of dyspepsia

The treatment consisted of galvanism in various ways, three or four times a week In order to cause an absorption of the new tissue formed behind the eyeball, a medical electrolysis was used For the negative pole, a solution of chlorid of sodium was applied directly to the eyes, while the positive sponge electrode was held in the hand Only a very weak current was borne and the electrolysis was caused by the solution—like an eye-bath through which the negative pole acted—as an absorbent To the enlarged thyroid gland the negative pole was also applied in the form of a sponge pad, and in this the result expected was the diminishing of the size of the goitre by the chemic action of electrolysis The application to the nervous system, in which the sympathetic was included, was varied according to indications and the solar plexus received its share of attention One of the applications consisted of a helmet to the head, while the other pole was placed over the solar plexus This helmet was made of strips of German silver fastened to a circle, which corresponded to the circumference of the head To have an even action to the head the hair was wet with water, and a wet felt cap placed between the head and the helmet. The result of this treatment was satisfactory in every respect and all symptoms of the disease improved

May 1, 1894 Improvement in every respect Patient felt more rested, the unpleasant nervous excitement was calmed, and sleep procured Heart had a more steady action, pulse was reduced and the measurement around the neck was twelve and seven-sixteenths inches in circumference, five-eighths of an inch reduction Patient left in July, 1894, for a sojourn in the mountains, which interrupted the treatment, *pro tem* Sept 6, 1894 Slight relapse has occurred while being without treatment The thyroid gland has increased, and the measurement is twelve and five eighths inches around the neck September 20 Treatment in the same manner as before, with galvanism, has made rapid improvement Heart is more regular, pulse is reduced, eyes still prominent October 2 Thyroid gland is reduced so that the circumference of the neck measured twelve and one-half inches November 30 Thyroid still lessened—measurement twelve and seven sixteenths inches Treatment continued, no medicine given, only galvanic applications March 22, 1895 Neck's circumference normal size—twelve and three-eighths inches—the patient when in perfect health wears a twelve and one-half inch collar The eyes have resumed a natural look, without having any protuberance Heart's action is normal, pulse 76, temperature 98 5, all nervous symptoms subsided, good natural sleep procured Patient considers herself well, takes part in all the pleasures of life and enjoys all in an active way

Case 2—Had many symptoms like the first, but was not as aggravated The treatment was similar and has been pursued for nine months The patient, a female, 30 years old, has improved so much that a cure may be pronounced, but is still under observation with galvanic applications at irregular intervals

Case 3—The third patient was a young lady who sang a principal part in an opera company A question arises here if heredity has an influence, as her mother died of Basedow's disease This patient had an exophthalmic goitre which was correctly diagnosticated, and different physicians treated her with medicines for over two years, during which time she grew gradually worse, until at last, at a performance after reëntering the wings, she fell prostrated and unconscious, ending her operatic career for a time The patient came under the writer's treatment in December, 1894 The electrical treatment was carefully but vigorously pursued, on an average, five séances per week were held In less than four months this very aggravated case was entirely cured All symptoms have disappeared, the constitution improved, weight increased, and features restored Patient considers herself well and is ready to enter another opera company. (Since the above has been written, patient has appeared on the stage, and feels very well)

In this case were complications of severe oophoritis and endocervicitis There was hemorrhage from the uterine cavity which increased on the slightest touch, and also a profuse mucous discharge The region of the ovary, in fact, the whole hypogastrium was painful, and the sensitiveness was increased on any pressure These uterine troubles have been treated locally at intervals The only therapeutic agent given this patient has been peptonate of iron to improve the quality of her blood on account of the anemic state, which was very marked The iron was given when the nervous symptoms were improved, and then it acted well

The electric treatment of this case consisted of galvanism, given in different ways and places The galvanic treatment was assisted by the spray of the static machine The spray was given twice a week very cautiously over the spine, head and over the sensitive parts of the ovaries with very good effect

The history of this case has been written up by the patient herself, in which is embodied notes about her mother, who died of Basedow's disease The interest is in the question of heredity The diagnosis in both cases of mother and daughter had been made by several eminent physicians with an unfavorable prognosis These notes are here annexed

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[6] Duncan Brit Medic Jour, Nov 8, 1888 p 986

History of the Third Case The patient, Z R , writes as follows

New York, April 6, 1895

At the age of 16 I had just returned from Europe, it being a pleasure trip only After being home but a short time I was taken seriously ill The palpitation of my heart troubled me dreadfully, and occasionally a spasmodic pain of the heart which was severe while it lasted My feet began to swell and I was so prostrated, physically that it was impossible to go the shortest distance without great exertion and fatigue Dr Loomis, the great authority on lung and heart diseases pronounced me incurable and warned my mother not to allow me to go anywhere without an escort, as I was liable to drop dead at any moment My mother shortly afterward was advised to put me under the care of Dr Louis Conrad He said I had a defect in the heart which was incurable, but if I took care of myself and led a quiet life that it would not bother me He also informed my mother that I was subject to a disease called "chlorosis," or 'poverty of the blood " Nevertheless, under his treatment I survived, not being very strong at any time—naturally delicate About three years later my mother, having enjoyed good health up to the date making her forty eighth year, began to complain , being of a bright, strong temperament and was subject to very severe, nervous headaches

I wish to say that she was a great business woman, having as many as 300 hands under her employ at one time, which made a great deal of brain work for her but at the time of which I speak, from that period, she seemed to fail gradually She grew more excitable, easily fatigued, excessively nervous, gave way to temper at the slightest provocation, which would terminate in a severe nervous headache, and the only cure was perfect quiet in her room in complete darkness A year later, she complained of increased fatigue, but I presume the Basedow's disease was gaining more hold on her system Her heart beat so tumultuously that she felt the pulsation in her throat, but her neck did not increase very much in circumference The inflammation of the eyelids and bulging of the eyeballs—this last being made more prominent by a staring expression Her knees gave way, but being of a determined disposition she would not go to bed

Shortly afterward, I went away on business My mother became annoyed at a servant, gave way to a fit of temper, and the excitement was too much for her She fainted, and from that day to the day of her death was confined to her bed As she had previously used up her strength worrying about domestic affairs, business was a thing of the past

From that time her heart beat faster and more irregular , marked pulsation was felt in the throat, ends of fingers, in fact, all over her body Under the optician's examination there was found a pulsation in the eye She had a hacking cough, at times violent, especially after eating, which would make it almost impossible for her to keep any food on her stomach, but that did not surprise me as each doctor would give her a new dose of medicine, and between the various ones and the medicine that would be given after each consultation I do not wonder at her digestion being ruined

Mother suffered all her life with constipation, the treatment of which she neglected The doctors gave her some medicine which made her bowels so loose that it made her very weak Three weeks before she died I had to take her to a hospital, one of the best in the city The doctors there gave her champagne, and it made her delirious After one of the delirious attacks she was put to bed by four doctors They told me she asked after me, required my presence, turned over and died She was 50 years old

I was sleeping, and as I was exhausted with the care and worry about her , I was not called until too late She died of exhaustion and with a pulse of 180 I have always had a doubt in my mind as to her death being easy—I suppose the doctors wanted to spare my feelings, but the truth would have been preferable I nursed and attended her through her entire sickness—the serious period being about seven months During the above period she lost flesh rapidly and was very much emaciated

A few months after my mother's death I was married My married life was a failure from a domestic and physical standpoint My husband abused me, which run my health down dreadfully, and combined with the shock of my mother's death, which I will never survive, I became a bunch of nerves

I have been doctoring for two and a half years and no relief In June I shall have been married three years, and will be 25 years old the 30th of next October

The doctors have not helped me one particle All they did was to fill me with opiates and chloral which almost killed me—in fact, I was in a state of complete collapse Four months ago I called in Dr Newman—having all the symptoms of Basedow's disease previously mentioned nervousness, sleeplessness melancholia, loss of appetite, irregular action of the heart, very excitable irritable temper, general fatigue at the slightest exercise, a feeling of numbness in the limbs swollen feet and pulling out of the flesh in which the finger could make an impresion After four months of galvanic electricity, I feel better than I have for years and consider myself well enough to discontinue treatment Occasional application from the static machine often relieved me of a nervous headache , in fact, relieved a pain in the spinal column which was for a period continuous and very painful

REPORTS OF CASES

On record are reports of cures by medicines, electricity, both combined, and even spontaneous cures These results, however, are exceptions, and the rule in the treatment of exophthalmic goitre is that they are failures, often ending in death It is also conceded by most authors that electricity, in this disease, gives better results than medicines This, however, does not prove that electricity in any form, and even given by specialists, always cures

There are failures and unsatisfactory results reported The writer has made diligent inquiries among reliable specialists in electricity and been told of cures, benefits, as also of indifferent and unsatisfactory results and even failures Such results must be expected, as the *modus operandi* of electricity has been conducted differently by the operators, and it seems even on entirely opposite plans

TREATMENT

Electrical specialists in the treatment of exophthalmic goitre have mostly given galvanism to the sympathetic, and in this they all agree They differ, however, in the selection of the poles, the direction of the current, the size of the electrodes, the duration of the séance and the intervals

It seems, further, a mistake to treat solely the sympathetic system and to overlook other important points of this disease Most European authorities give the electric applications too short, being from one to two minutes' duration, while in America such séances are prolonged to about twenty minutes, which tires the patient and gives too great stimulation The question arises, if it would not give better results to arrange the electric applications more rationally to symptoms and complications, as with our present knowledge neither etiology nor pathology of this disease is settled

PROMINENT SYMPTOMS

Beside complications and natural consequences, exophthalmic goitre has three prominent symptoms to which the treatment should be directed These are

(*a*) Irregular heart action with all kinds of nervous symptoms

(*b*) Enlargement of the thyroid gland

(*c*) Protrusion of the eyeballs

Complications are anemia, emaciation, insomnia, uterine diseases, irritability, edema, fainting spells, etc

The Indications for Treatment are (*a*), to reduce the pulse, regulate the heart action, produce rest and sleep and allay the nervous symptoms Beside the sympathetic system it is necessary to regulate and treat the pneumogastric and vagus , (*b*), to diminish the size of the thyroid gland, (*c*), to remove the plastic new formations behind the eyeballs

The Treatment, therefore, would be

1 Galvanism to the sympathicus, vagus and pneumogastric, in such form as to reduce the pulse and stimulate the heart's action In other diseases, galvanism quiets to such a degree that patients fall asleep while the application is given

The Strength of the Current must be regulated according to the toleration of the patient in every case The operator must exercise great care in slowly increasing the electro motive force of the current, till the exact amperage is found, and every step of increase and decrease must be made with care and without any accidental shake or jerks of the current The exact measure in milliamperes can not be advised and depends entirely on the sensation in each individual case Some patients may be so irritable that even 2 milliamperes may be too much, while others can endure 20 or even 30 It is also essential to regulate the strength of the current in the same patient according to the region to be galvanized, to the size of the electrodes and the resistance between the two poles

The *Static Electricity* will assist to regulate the vascular circulation, allay nervous irritation, creating a sedative to the heart and a more refreshing sleep

2 The thyroid gland will be reduced with almost a certainty by the negative pole of the galvanic battery Some report good results by applying both poles near the gland, one on each side While this may have result the method is harsh and not rational Surgical means have not been successful

3 The protrusion of the eyeballs can only be cured by diminishing the new formations of tissues, grown behind the eyeballs, by which the eyes have been pushed forward This can be done by the use of the negative pole to the eyes, which acts like an electrolysis absorbing the foreign tissues The complications have to be treated according to indications

The static electricity is here recommended only as an assistant and must be given with care Sparks are contra-indicated, as they are too severe and will create often more nervousness and even pain Breeze or spray will act well, allaying pain and regulating the circulation

There Should be Avoided Too strong currents, too long séances, which tire the patient and over stimulate internal electrolysis, and surgical electricity The faradic current has been used and recommended, given with certain precautions, but it seems it is contra-indicated, as a severe measure, which overstimulates and disturbs more the diseased nerves

With regard to general rules, avoid also excitement, over-exertion, stimulants, strong tea and coffee It is evident that the treatment, and especially the application of the electricity, must be intrusted to an expert, and that the family battery for self-use (or abuse) is entirely out of the question

64 West 36th Street

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ELECTRICITY IN THE TREATMENT OF OCULAR NEURALGIAS

Read in the Section on Neurology and Medical Jurisprudence at the Forty sixth Annual Meeting of the American Medical Association at Baltimore, Md May 7-10 1895

BY HORACE M STARKEY, M D
CHICAGO

It is with much diffidence that the writer responds to the invitation of your chairman to present a paper to this Section, for if there is any class of men for whom he has the most profound respect and before whom he is inclined to stand in silent awe it is those who are solving the complex problems presented in the study of the construction, functions and diseases of the nervous system He is, however, the more willing to present a very simple and practical fragment to this symposium, because he is not aware that much has been written on this particular phase of the subject, and because he finds no reference to it in the very able paper on "Electro-Therapeutics of Diseases of the Eye," read before the last meeting of the American Electro-Therapeutic Association, by Dr L A W Alleman, of Brooklyn

The intimate relation between eye strain and disease of the nervous system is so well known as not to require mention Many persons with weak and unstable nervous system are kept for years in a condition of invalidism, and suffering because of a constant excess of expenditure of nervous energy in some particular direction Probably the most frequent source of such excess of expenditure is to be found in the eye and its appendages It is the duty of the ophthalmologist to seek out and endeavor to correct these various sources of irritation, whether due to faulty shape of the eyeball, to irregular action of the eye muscles, to defective nerve impulses or to inflammatory diseases Many patients are found in whom an error of refraction, or difficulty in maintaining the eyes in position for single binocular vision, or weakness of the external and internal muscles of the eye, or all these combined, have been for years the cause and source of headaches and pains in and about the eyes Most of these cases are relieved with more or less promptness by removing the cause A certain number of them, however, are not so relieved The long-continued over-stimulation and irritation of the nerves seem to have induced a hypersensitive condition and a habit, as it were, so that, after the most careful correction of refraction and of muscular balance the neuralgia continues

Many of these persons just described, whose condition is truly pitiable, appear to be relieved by the systematic and careful use of electricity But while many are so relieved, some unfortunately are not, and continue to have almost constant pain, more severe on use of the eyes, notwithstanding all that we can do for them As we are more careful and exact in diagnosis, however, the number of such unrelieved cases becomes smaller

There are two classes of the patients mentioned above, to whom electricity may be advantageously applied 1, those with weak extrinsic muscles who may receive the primary faradic current for its direct effect upon those muscles, and 2, those in whom neuralgia persists after removal of the exciting cause, and who should receive the galvanic or the secondary faradic current

A brief description of the method of application may be serviceable First, as to time The time required for a treatment is from two to eight minutes, with a probable average of four or five minutes, depending upon individual peculiarities We probably all begin any electrical treatment with a minimum of time and current, and then increase both as we find indications for so doing The indifferent electrode of absorbent cotton, three inches in diameter, is held by the patient to the mastoid, and neck just below the mastoid on one side the first half of the application, and on the other side the last half In applying the faradic current a double eye electrode may be used over the eyes, but the operator's hand makes altogether the best electrode, because the fingers can be used to single out the different muscles and convey the current more directly to them The current employed should be mild, so as to produce a sense of tingling with little or no actual pain Unfortunately we have as yet no practical means of measuring the faradic current For the persistent neuralgias the secondary faradic current should, from theoretical grounds, be most useful, but practically, the weakest application of this current about the eyelids is often so painful that it will not be tolerated The sinusoidal current would probably be better borne Very decided and immediate relief is frequently obtained from the galvanic current with the anode as the active pole In this application, the time and the position of the indifferent electrode are as stated above, while the active positive electrode, which is preferably double, is applied by a gentle massage motion to the lids, cheeks, brows and temples The amount of current required is but from 2 to 5 milliampères, though in some cases even this very small current is too great for comfortable use The current is usually very soothing and grateful, and patients frequently express surprise at the rapidity with which the pain is relieved and at the calm content and drowsiness that steals over them This effect is very likely due in part to the action of the current on the cervical sympathetic The duration of relief from pain is quite variable, it may at first be but a few minutes and it may continue for several hours Usually, where benefit is to be secured, the time of relief increases as the treatment progresses, so that in a case where the first application gave relief for one hour, the third may give relief for two hours, and so on, until the pain is absent from one day to another, when the time between treatments may be lengthened and ultimately the pain is entirely relieved A few cases were briefly summarized, but the limit of papers in this symposium will not permit their introduction

NOTE —A time limit of four minutes was placed upon these papers

DISCUSSION ON PAPERS READ BY DRS WATSON, MASSEY, NEWMAN, AND STARKEY

DR WILLIAM J HERDMAN, of Ann Arbor, Mich —I was sorry that Dr Watson did not more specifically state the nature of the esophageal strictures with which he had been dealing His experience has certainly been very satisfactory The procedure he adopted is that which I have generally found, from examining the literature of the subject, to be most likely to result satisfactorily, that is, the gradual dilatation of the stricture with the assistance of the negative electrolytic action What I believe to be the fact as demonstrated by laboratory tests on living tissues with negative electrolysis, is that by a cataphoresis we have drawn to the spot, when the negative pole comes in contact with the issue, an increased fluidity Not only is the fluidity increased, but at the same time we have an alkalinity produced by negative electrolysis You have there the conditions for gradual disintegration of fibrous tissue Where you have a purely spasmodic stricture, as possibly was the case in some of the instances mentioned this morning, it is overcome by action through the nervous system By passing the current from above downward and producing the natural order of esophageal contraction, you habituate that part of the esophagus to pursue the normal peristaltic action Peristalsis in the esophagus is reversed in a good many of these cases and much of the difficulty arises from some part contracting below while the upper part is dilating, in other words an irregular distribution of nerve impulse to the muscular tissue occurs, and you can gradually overcome that by the electric current It matters not in that case whether it is the positive or negative pole But when you have fibrous tissue to deal with, you have a pathologic barrier which is not spasmodic, but genuine and real to overcome, and there electrolytic action by means of a negative pole is essential To my mind it is the only rational procedure we have A surgical procedure leaves only another cicatricial band By the cataphoric action of the electricity you increase the fluidity of the part and this fluidity distends the fibers in the cicatrix, then, by means of the alkalies which are drawn there by electrolytic action the tissues are dissolved You are practically using an alkalin caustic This is the same process that Dr Newman has adopted for the removal of cicatricial bands in the urethra It will serve the same purpose for the ophthalmologist who attempts to dilate a stricture of the nasal duct, and it will dissolve cicatricial bands in the neck of the uterus I have used this method over and over again in esophageal stricture and frequently in urethral stricture It is a physical process which can be demonstrated at any time upon living tissue in the lower animals

There is one thing that was said by the author of that paper which causes me to doubt the efficacy of his method He makes use of aluminum electrodes Now aluminum is the only metal which is dissolved by the alkalies or by use as the negative pole, and his electrode is not only dissolved away in this manner, but there is a question as to whether he does not get an irritating effect from the sodium aluminate and the potassium aluminate which is formed at the point That these substances are formed at the negative electrode during electrolytic action when aluminum is the material employed, I am quite satisfied from tests I have had made for me some sodium and potassium aluminate in the pure state with the view of testing its action on the tissues It is very acrid to the taste, but I have not as yet investigated its action on living tissue to determine to what extent it is irritating There is no question that certain substances are carried into the body by means of the negative electrode There are those who hold that cataphoresis is carried on solely at the positive pole, but there is a cathodal diffusion as well It is just as well to make use of steel electrodes as those of aluminum Dr Newman has taken up the interesting and perplexing subject of exophthalmic goitre This one fact has come out from all recent methods of treatment advised for exophthalmic goitre, that galvanism is an indispensable element in the treatment I have had occasion to look over the literature of exophthalmic goitre during the past eight or ten years pretty thoroughly, and during that period I do not think there is an author speaking of it or a writer writing concerning it, who does not put galvanism in a prominent place in the method of treatment, but it is amusing to see what a variety of methods they have employed for applying galvanism Some make use of the negative pole over the thyroid, some the positive Some treat the cervical sympathetic, putting one electrode underneath the ear and the other on the sternum, with a view to bring as much of the cervical sympathetic under the influence of the current as possible Others adopt a transverse method There is very little that can be inferred from this as to what value or what particular effect it is that galvanism produces in this treatment Every one has this idea as to the pathology of exophthalmic goitre and I have had mine for a good many years The notion of the pathology differs almost as much as the persons speaking of it, each one seeming to have a different conception This only indicates to us how little we know about it as yet I have now had twenty-three cases of exophthalmic goitre, every one of these, although some of them seemed to be desperate at the outstart, are well to-day. The worst case I can recollect is that of a woman in Kansas who was bedridden and very extensively edematous. Her respirations were 40 to 45 per second and her pulse rate was 140. She was unable to bear a teaspoonful of any nourishment on her stomach. That woman is perfectly well. Others have not been so serious in their conditions, but some of them were certainly very low. Galvanism was in all of these a very prominent part of the treatment. I would not regard galvanism of itself as the only method to be employed; in fact, I regard it as absolutely essential to make use of accessory measures, such as cardiac stimulants and measures for promoting nutrition. My experience may not be different from others, because I think other measures of treatment of this malady are more successful than those of a few decades ago. I am presumptuous enough to regard this disease as always curable.

As to static electricity in exophthalmic goitre, I think its effects are good. It acts as a vasomotor stimulant and assists in that way. I was extremely interested in the paper read by Dr. Kellogg upon the physiologic effects of the sinusoidal current. In the treatment of that subject, Dr. Kellogg has made considerable progress toward accuracy in the use of electricity. D'Arsonville, some few years ago, made the statement that the physiologic action of electricity depended upon the "curve of excitation" produced by the instrument employed. We have in static electricity an alternating current of extreme rapidity. Billions of alternations take place in the course of a second during the passage of the spark. The current, however, is very minute in quantity. The electro motive force of the current is enormous; it is sometimes millions of volts. The amount of electromotive force required to cross six or seven inches of dry air would need to be enormous. The effect produced physiologically by such an electro-motive force, with a very small current, but a current which is rapidly alternating, must differ much from that of an induction coil which is alternating perhaps only two or three hundred times in a second, where the electro motive force does not exceed 30 volts and where the current as compared with the static machine is greatly in excess. The static machine may have only 1 of a milliampère of current, where the induction coil may have 10 milliampères or more. All forms of electric apparatus differ in the character of the curve which is produced. D'Arsonville called that the "characteristic of excitation," and the "characteristic of excitation" has its relationship to physiologic action. Dr. Kellogg brought out this fact in regard to the action of the sinusoidal current. This, he says, has extreme penetrating power, so that its action upon the muscular system is very decided; in other words, that it does not act upon the sensory nerves to any extent, but it does act markedly upon the muscular tissues, and for that reason serves a great variety of purposes that no other current serves so well. I think the reason for this lies in its peculiar "characteristic of excitation." In other words, that the sensory nerve terminals do not respond to an alternation of that character while muscular tissue does. It is not probably due so much to the penetrating power, as to the character of response which a sensory nerve is capable of making. He finds, for instance, that this current will produce no sensation at the temple, whereas there will be sensations of light excited in the optic nerve or in the retina. Now we know there is a great deal of difference in sensitiveness between the retina and the skin, and the reason it excites the retina when it does not in any way cause sensation on the skin is not, in my opinion, due to the penetrating powers but to the fact that the nerve distribution in the skin differs in the manner in which it responds to external excitations from that which we find in the retina. The retina is capable of responding to light, which, as we all know, has billions of vibrations per second. I believe that in our investigations concerning electric action we will eventually have for one purpose one form of current, and for another purpose a different form, according as the tissues respond to one or the other. We all know that we can get such a rapid vibration and high voltage of current that it can be passed through the system without our knowing anything about it. In the atmosphere of Tesla's laboratory you have vibrations passing through you and at such voltage which, if slower and lower, would kill instantly, but being so rapid they have no appreciable influence on the economy. In our therapeutic applications of these various forms of electricity, we must eventually know what is the "characteristic of excitation" of every machine we make use of, and in that way we will get a scientific application of electricity that will have its physiologic and therapeutic counterpart, and I think toward that result we are rapidly tending.

Dr. G. Betton Massey, of Philadelphia—One point in Dr. Herdman's remarks I might take exception to, in regard to the excitation of the sense of vision by the sinusoidal current. Heretofore the sense of vision has been excited only by the galvanic current and not by the faradic. It has occurred to me that the reason why the sinusoidal current causes a response by the retina is on account of its larger amperage. I can not say what the amperage of this machine is; it is somewhat difficult to find out as it is an alternating current. It is well known that it is not a direct excitation that necessarily causes the sense of light, but a reflex one. That was a matter under considerable discussion some years ago, and I myself, in 1885, contributed to the American Neurological Association the report of a case of anesthesia in which the absence of the galvanic test was marked in an area of anesthesia about the size of a dollar over one eye; no matter how strong the galvanic current we could localize in that point, although within an inch and a half of the retina itself. Yet, anywhere outside of that area, galvanic currents with interruptions would produce both taste and sight. One of the uses of the sinusoidal current will be the power of giving rapid alternations of practically slight galvanic currents of such regularity and gradation as to cause muscular contraction without pain, since the variation is not quite acute enough or irregular enough to cause sensation.

Dr. Hugh T. Patrick, of Chicago—I would like to differ with Dr. Herdman when he says the galvanic current is an indispensable means of treatment in Graves' disease. I would like to make the point that in many different varieties of treatment of this disease, it improves and pursues a favorable course, although not generally to complete recovery. I happen to have seen in the last three or four years, about sixty cases of Graves' disease. These were seen under the care of various observers and were consequently under various methods of treatment; some of them purely hydrotherapeutic, some purely faradic, some purely galvanic, some purely dietetic, some purely rest treatment, and so on. I do not think that among all these cases I saw one which was treated for a length of time, sufficient to judge of the treatment, that did not improve. The only thing which I saw in common in the treatment was repose, rest and general hygienic measures. Now I beg leave to offer the opinion that the rest treatment and general treatment alone may give exceedingly favorable results in the treatment of this affection, equal to any that have been produced by the galvanic current; and I do not think that our enthusiasm for electrical treatment should carry us so far as to say that galvanism is indispensable in the treatment of Graves' disease.

Dr. George J. Preston, of Baltimore—One little point concerning exophthalmic goitre, and that is the immense loss of electrical resistance. That was called to my attention some ten years ago by Vigarow, who was, I think, the first observer of the phenomenon, that in cases of this disease there was practically no electrical resistance. In the somewhat limited experience I have had in such cases, I have been able to confirm this, that the electrical resistance is practically *nil*. I have been quite at a loss for any satisfactory explanation of this point. I asked my friend, William J. Morton of New York, an authority on such matters, and he said that he thought it was due largely to excessive moisture of the skin. My own experience would not bear that out. There is evidently some special susceptibility to the negative current in these cases. It is a noteworthy fact that when the thyroid has been removed, surgically, the same loss of electrical resistance results, and this brings out a curious similarity between the removal of the thyroid surgically and exophthalmic goitre, which seems to bear some remote relation to the thyroid gland.

Dr. G. B. Massey—Can the Doctor tell us what the resistance was in these cases? It is startling to hear that there is no resistance; even a copper wire has resistance.

Dr. Preston—I did not expect to be taken literally when I said that the resistance was lost. I frequently measured the resistance and found it down as low as about 500 ohms and in one case as low as 300 ohms, using an electrode about 4 cm in diameter. I used an electro-motive force of perhaps 20 to 30 milliampères. I used an ordinary Wait & Bartlett machine. Normal cases under like conditions would give a resistance of about 2,000 ohms.

Dr. Chas. G. Hill, of Baltimore—Speaking generally of electro therapy, I wish to say that we have much to learn in that line, notwithstanding the rapid advancement recently made, as evidenced by the excellent scientific papers read before this Section. I recall many cases of the application of electricity for the reduction of the thyroid in exophthalmic goitre, and some cases would melt away like magic while in others there was practically no effect I have applied electricity in other lines, in surgery for instance, and sometimes with very good results I recall one case of a small fibroid beneath the skin which would have caused no inconvenience except for the pressure upon it of the dress sleeve The patient, a nervous woman, objected to the knife I applied the *constant current*, not expecting much from it, and was very much surprised in two or three applications to find that the tumor disappeared entirely There is another point which was not brought out to day, and that is one of the peculiar effects of the electrical current in the production of ozone in the tissues We never apply an electrical current, constant or faradic, that we do not develop in the tissues a certain amount of ozone, and probably it is through this agent that we often get the effects which are realized by the application of the current

DR THEODORE DILLER of Pittsburg—Regarding the lessened resistance in Graves' disease, it seems to me that the explanation offered is a rather reasonable one The increased moisture of the skin, together with the capillary dilatation would seem to me to be sufficient to account for the phenomenon This opens up another thought, which is, that this lessened resistance being so constantly present in Graves' disease may be useful as a diagnostic feature For instance, I have on two occasions seen cases of tachycardia Very often this increased heart's action is the first symptom of Graves' disease, and I quite agree with Dr Herdman that it is the most constant symptom In cases of tachycardia, therefore, it would be well to measure the resistance, and it might lead to important indications I would like also to record my experience with the constant current in Graves' disease It has been exceptionally unsatisfactory I have never seen it do much good Only recently, after a six weeks' course of treatment, the patient coming to my office, there was no good result whatever The patient was then put upon some medication, and three or four weeks later was sent to a hospital and remained in bed for six weeks without medicine of any kind Under the rest treatment there was marked improvement I believe that of all forms of treatment known to me that rest is the most efficacious I would like to ask these gentlemen who have recorded observations, in what condition the patients were who were receiving galvanism whether they were in bed or going about

DR HUGH T PATRICK—I am sorry that my personal experience can not contribute to our knowledge of the decrease in resistance to the electrical current In most of the cases in which it was tested, there was undoubted diminution The explanations which are thus far produced hold good for some but not for all of the cases Regarding the conditions of the patients I saw treated, most of them were able to be about, but some of them were in bed The worst case I saw was that of a woman whom I observed almost constantly during the better part of a year She was better and worse, better and worse under galvanic treatment, and finally she was decidedly worse. She was then put into a hospital and was there so bad that she could not turn over in bed She had hallucinations, her chest expansion was about three-fourths of an inch and her pulse at times could not be felt at the wrist We all expected her death She went home however, and within six weeks after leaving the hospital had gained almost fifty pounds in weight under practically no treatment at all but rest at home, whereas before she had grown worse at home under galvanic treatment

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OBSERVATIONS ON SOME CHARACTERISTICS AND RELATIONS OF THE DYNAMIC AND STATIC FORMS OF ELECTRICITY

Read in the Section on Neurology and Medical Jurisprudence at the Forty sixth Annual Meeting of the American Medical Association at Baltimore, Md., May 7 10 1895

BY A D. ROCKWELL, M D

NEW YORK

The more thoroughly one studies electro therapeutics in all its relations, medical and surgical, the clearer it becomes that the real scientific basis for the use of electricity in medicine and surgery is found in electro physics more than in electro-physiology, and therefore in studying the therapeutic characteristics of electricity, and the relations of its various forms to each other, we can not be too well grounded in the laws of electro physics

One of the most perplexing questions to the tyro in electro therapeutics relates to the differential indications for its use, but if one is well equipped with a knowledge of physics, with a well directed clinical experience, the various special problems that arise in practice, whether of a theoretical or a practical character, very quickly resolve themselves Often in discussing the subject with members of the profession more or less interested in electro therapeutics, I have noticed a manifest tendency to use one form to the exclusion of the others, and an especial tendency to discard the faradic current, in favor either of the galvanic or static electricity

The contention is, on the one hand, that its quantity is so small as compared with the current direct from the cells, that to mechanical influences alone must be attributed whatever beneficial effects follow its use, and, on the other, that its nutritional effects are inferior to the static form of electricity because of the tremendous electro-motive force or voltage of the latter Broadly speaking, seeing that static electricity is all voltage with little amperage or quantity, and that the galvanic current is all amperage with little voltage—while the faradic current occupies a position between the two—there are in these conclusions a manifest contradiction The truth is that each has, in some respects, a special field of its own, and no one of the manifestations of electricity can be dispensed with, if one expects to get all the results that it is capable of giving In regard to the faradic current therefore, it has been urged that other mechanical methods—massage, tapping, and contrivances for producing rapid vibratory movements are equally serviceable Those, however, who hold these views have but a very incorrect appreciation of the true action of the faradic current, and have certainly fallen far short of completeness in their practical experience with it

Many years ago, when I first began to use electricity in practice, my efforts were of necessity confined to the faradic current Galvanic apparatus was not obtainable, and whenever it was desired to use the galvanic current one had to resort to the inconvenient and ill-smelling voltaic pile This necessity was not altogether without its advantages, however, since it, for the time being, relieved me of the somewhat perplexing problem of current differentiation and enabled me to give undivided attention to the faradic current One of the most common observations as to the effects of a thorough general application was a relief of muscular tire after prolonged activity, and an increase in the flexibility of limbs that had become sore and stiff after the rest following excessive and unaccustomed muscular exertion One does not have to search far for a rational explanation of these well-known effects of electricity, although at the time a general want of appreciation of the physical characteristics of the current gave to most of the explanations offered a fanciful rather than a scientific and practical basis

Mechanical influences were undoubtedly predominant, not, however, as manifested by vigorous muscular contraction, but through molecular agitation, sufficient to give passive exercise to both the superficial and the deeper lying tissue In these cases we get, associated with cell exhaustion, a condition of circulatory sluggishness with a deposit of the toxic products of metabolism, conditions which are well adapted to appreciate the corrective and exhilarating effects of molecular agitation

It is on the selfsame principle that the faradic current is now applied with such admirable results in chronic congestions and indurations of the uterus and affords such instantaneous relief in some of the simple non-mechanical varieties of dysmenorrhea The blood-flow in the over-congested organ is accelerated A sort of circulatory drainage is established and a healthy local action more quickly and effectually brought about than by any known method If, therefore, we obtain from the faradic current effects that were simply mechanical and nothing more, we would still find it a very good thing to aid us in our therapeutic efforts We do not get from it, to be sure, any marked chemic or endosmotic or exosmotic effects, but we do get physiologic effects of the most pronounced character, and as the physiologic effects of electricity take place in living tissue alone, while all other effects are observed in the dead as well as in the living—in inorganic as well as organic substances—these physiologic effects are of chief concern to us as physicians in the consideration of the nutritional effects of electricity We find, then, that this current accelerates the circulation, influences the secretory and excretory processes of the body and hastens absorption To what extent these physiologic effects are of mechanical origin no one, I am sure, is yet quite prepared to say, but the results which follow this method of treatment render it reasonably certain that we get upon the nerve structure itself, together with medical effects, influences of an entirely different character

The claims made as to the advances in electro-therapeutics during the past few years are large perhaps too large, but yet in some directions—especially in the realm of gynecology—much has been accomplished Interstitial electrolysis, as suggested by Gautier, is a method of considerable interest, and although it may not fulfill the expectations of its author, yet some promising results have been reported and more may be hoped for By this method the chemic action of the positive pole is utilized, not only for its effects upon the tissue itself, but upon the metal electrodes, mainly copper or zinc, that are applied directly to, or inserted into, the diseased part In this way, new salts are formed and deposited in the tissues, oxychlorid of zinc when zinc, and oxychlorid of copper, when copper electrodes are used It is the cataphoric property of the current, however, which carries or forces these salts, the product of electrolytic action, through the surrounding tissues to a greater or less depth according to the strength of current and treatment The technique of this treatment can not be entered into here, further than to say that the positive pole is always the active pole and that the necessary current strength is from 20 to 40 milliampères The best results seem to have been obtained in diseases of the endometrium, although the method is applicable to various other diseases of the uterus and appendages

Another advance in the utilization of the galvanic current is by what may be termed the depolarizing method In 1892 I described the depolarizing electrode, with experimental observations, and in 1893 some suggestive clinical results following the use of the method in various forms of disease Briefly stated, the idea is to altogether eliminate either one or the other pole, according to the indications for treatment By using an electrode with resistance in ohms equal to or greater than the resistance offered by that portion of the body between the electrodes, the neutral point is thrown outside the body, which may at will be brought under the influence alone of either the negative or positive pole

It would not have occurred to me to consider the possibility of any special therapeutic effect being associated with this simple and well-known fact of electro-physics, had I not been led to make some experiments that revealed a number of exceedingly interesting and suggestive phenomena—and quite new so far as I can find out—in the realms of electro-physiologic experimentation

If two needles connected with either pole of a galvanic battery are thrust into a piece of raw beef and a current of sufficient strength allowed to pass for a few minutes, litmus paper applied at the point of entrance of the positive pole shows the regulation acid reaction and at the negative pole an alkalin reaction. If now we intercalate on the negative side a properly constructed electrode, having a resistance sufficient to throw the neutral point outside the body, a very different condition of things is seen At the positive pole the same strong acid reaction is obtained, but under the negative pole there is little if any observable reaction On testing the liquid, however, inside the electrode, the seat of the neutral point, the alkalin reaction is obtained, the same as at the point of contact on the body when the ordinary electrode was used

The most interesting experiments, however, were those made on the legs of a frog, which, as is well known, retain their irritability to stimuli for a long time after death If, after decapitation, the hind legs of a frog are subjected to the influence of either the positive or negative pole by the use of ordinary electrodes, the changes in irritability are imperceptible If, however, they are subjected to the influence of the positive pole alone, the action of the negative pole being eliminated in the usual manner, the muscles of the thigh will exhibit very decided diminished irritability If, on the other hand, the action of the positive pole is eliminated, and the limb is subjected to the action of the negative pole, we get the characteristic phenomenon of catalectrotonos or increased irritability, and the muscles readily respond to currents much weaker than when they are in their normal condition

These phenomena and various others are all readily verifiable, and for a more detailed account I refer to former articles [1]

Utilizing the suggestions offered by these interesting physiologic observations, I have not unfrequently found it possible to favorably modify and even permanently relieve various conditions that formerly were not relieved by the ordinary methods of application So far as the faradic current is concerned, the great utility of currents of high tension when applied through low resistance in the human body and especially by the bipolar method can not be overestimated As an analgesic in uterine and abdominal pain, when passed through the low resistance of the mucous membrane, these induced currents of tension are of the greatest value, but so far as outward applications of the faradic current are concerned, I doubt whether we have made much practical advancement either in the methods of application or in the efficiency of apparatus, and in saying this, I do not forget the alternating sinusoidal currents introduced into electro therapy by D Arsonval, the essential nature of which is that it has a uniform rise and fall of potential from zero to the maximum and back again in both directions For this current it is asserted that it possesses greater penetrating power than the ordinary faradic current, and that less pain attends the vigorous muscular contractions that it produces In comparing the effects of this and other modes of electrization, D' Arsonval says 1, that the continuous current does not show any immediate influence on nutrition, 2, Franklinization increases respiratory combustion, but in a less manner than sinusoidal currents, 3, ordinary faradization with a very feeble non sinusoidal alternating current can increase respiratory combustion without pain, but with a strong non-sinusoidal current produces a fatal electrical tetanus

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[1] New York Medical Record, May 14, 1892 and May 6, 1893

My own experience, however, teaches me that, for most practical purposes, the old continuous coil with its 2,000 feet of wire and its perfect rheotome attachment, yields a current the essential character of which, as an aid to nutrition and for general tonic effect when applied externally, has not yet been surpassed It has always seemed to me that the most important thing in electricity in medicine, the fundamental idea upon which all its therapeutics is based, is its nutritional power It is this idea, which, in connection with Dr Beard, I enunciated many years ago, and upon which I have based almost everything I have said or written upon the subject since As to which of the various manifestations of electricity possesses the greatest efficiency in this direction, ideas will differ according to the extent and character of one's experience Static electricity is undoubtedly a most valuable addition to our armamentarium I could not afford to do without it No one who expects to meet the demands of all the varying idiosyncrasies of the nervous system can afford to be deficient in the completeness of his electrical outfit And yet the introduction and popularization of static electricity is responsible for a vast amount of unscientific and inefficient work in electro-therapy among those who confine their efforts to this form of electricity, with little knowledge of the subject in its entirety With a magnificent static apparatus in all its pyrotechnic glory, set in motion and readily controlled by an electric motor, the treatment of a patient becomes the simplest and easiest thing in the world, both for physician and patient, and I should be glad to assure myself that it is the most efficient method of securing the tonic and nutritional effects of electricity But after years of observation and comparative trial, I regret that I can not come to this conclusion I regret it, because it has the great advantage of ease and simplicity of application over the general use of the faradic and galvanic currents For other reasons, however, it is not to be regretted It would indeed be a misfortune if in order to obtain satisfactory nutritional effects from electricity, the costly static apparatus which few can possess was an absolute necessity Static electricity must ever be considered as an adjunct, merely, to the dynamic form of electricity, and this truth will always be taught by those who combine both an honest purpose and a thorough experimental knowledge of the subject

IMPURE MILK IN RELATION TO INFANTILE MORTALITY

Read before the Medical Society of the District of Columbia Nov 1 1895

BY GEORGE M KOBER M D

PROFESSOR OF HYGIENE, MEDICAL DEPARTMENT GEORGETOWN UNIVERSITY, WASHINGTON, D C

Last winter I had the pleasure of assisting our respected President in the collection of evidence on milk infections, the task proved so profitable that, by his encouragement, the investigation was extended in other directions and I present to you the results in one of these fields

According to Oesterlein's statistics, it is safe to assert that the average death rate during the first year of life is 188 out of 1000 infants born In England the average is 111 8, in France 223 2, in Italy 273 3 (Farr) These are mean rates for rural and urban districts In towns and cities the mortality is always higher, amounting to 33 6 per cent, as compared with a rural mortality of 27 8 per cent In some of the large cities the infantile mortality is simply frightful, having reached as high as

480 per 1,000 at Chemnitz,
360 " " ' St Olave,
320 " " " Glauchau,
280 " " " Paris
277 " " " New York,
276 " " " Brooklyn,
268 " " " Baltimore,
261 " ' " Boston,
256 " " " Washington,
250 " ' " Liverpool,
230 " " " Philadelphia

The still-births are excluded in the American statistics From these figures it appears, that, in many cities, out of every 100 children born alive, over one-fourth perish before the completion of the first year, but fortunately for the perpetuation of the human race, the average infant mortality all over the world is only about one sixth of those born

Of the twelve months during the first year of life, the first month furnishes the highest mortality, followed by the second, third and fourth month, next, by the twelfth month, this jump from the fourth to the twelfth month is quite suggestive, as it is the usual period of weaning with its attending danger from digestive diseases incident to artificial feeding, next to the twelfth month comes the fifth, sixth, seventh, eighth, ninth, tenth and eleventh months During the second and subsequent years the mortality gradually decreases, and of children between the age of 1 and 5 years, there die annually 37 out of 1000, a loss of 188 during the first year, with 148 during the next four years, making a total loss of 336 out of every 1000 children born

The mortality is greatly influenced by climate and seasons, as shown by a higher rate in the polar and equatorial regions with extremes of heat and cold Generally speaking, the mortality is higher during the cold months than during the moderate months, on account of the greater prevalence of diseases of the respiratory organs, but the hot months like June, July and August are the most dangerous, at least, in this country and Europe, on account of the disastrous attacks of gastro enteric diseases The fatal influence of heat and cold upon infantile mortality is well illustrated by the tables published in Dr Busey's essay on the "Mortality of Young Children," and while they apply to the city of Baltimore, because the essay was written at the request of the trustees of the Thomas Wilson Sanitarium for Children of that city, they are no less true of other large manufacturing cities

It would lead me too far to consider the various meteorologic conditions which influence the mortality rates as shown in these tables, but we should at least bear in mind, that sudden changes in temperature are especially liable to offend the peripheral nerves and thus cause an irritation, which is transmitted by reflex action to other parts of the body, where it may induce congestions, especially in the respiratory and digestive tracts During the heated term the blood too, owing to an excessive function of the skin, is deprived of some of its constituents, it is taken away too much and too long from the internal organs, the proper distribution of the blood supply is interfered with, in consequence the tone of the stomach, heart, brain and other tissues is lowered, appetite and digestion suffer, the red corpuscles are decreased and not only infants, but adults experience languor and general debility, but apart, from this, and more intimately connected with the subject, remains the fact that heat not only tends to diminish the power of resistance of every cell to disease, but also favors the development of germ life in the milk

This excessive infantile mortality has always been considered the opprobrium of the healing art Dickson asked in vain "How shall we prevent the early extinction of half the new-born children of men?" West truthfully asserts 'At least a third of all your patients will be children, and so serious are their diseases that one child in five dies within a year after birth and one in three before the completion of the fifth year," and Swayne pathetically exclaims "May it fall to the lot of some reader ere long to solve this startling problem "

While powerless to solve the mysteries connected with this subject, many of which are doubtless connected with the mortality laws in general, an attempt will be made to answer the practical question, Can they be reduced? I can not enter into details of infant hygiene, but must at least point out the fact that the mortality can be greatly reduced by improving the original stock, *i e*, the physique and habits of the parents, and placing them as well as their offspring under more suitable environments, especially with reference to fresh air, sunlight, exercise, suitable clothing and habitations and, last, but not least, proper food The influence of favorable hygienic conditions is demonstrated by Casper's statistics published in 1825, showing that the mortality rate among royal children was only 57 per 1,000, as compared with 345 per 1,000 among the infants of the poor Clay calculates that of every 100 children born in England, 90 will be alive of those born in aristocratic families, 79 in the mercantile class and 68 among the laboring classes The difference in the mortality of legitimate and illegitimate children is very great, and varies according to Uffelmann as follows

	Legitimate children	Illegitimate children
In France, mortality of	16 per cent	30 per cent,
" Austria, " "	22 9 " "	35 1 " "
" Sweden " "	13 0 " "	24 8 " "
" England, " "	14 0 " "	35 0 " "

But the most frightful mortality rates are everywhere furnished by the hand or bottle-fed children, amounting in Berlin 40 to 47 per cent, in Hamburg 29 4 per cent, and in Paris, according to Monat, it has reached as 70 to 75 per cent Professor Kehrer informs us that of 8,329 infants six months of age and under, that died in Munich between 1868–1870, 1,231, or nearly 15 per cent, had been suckled from the breast, and 7,098, or over 85 per cent, had been hand or bottle-fed

If we stop to inquire into the immediate cause of the excessive infantile mortality during the first twelve months, we find that about 40 per cent perish from diseases of the digestive system, about 21 per cent die from affections of the respiratory organs, next in frequency are the infectious diseases like diphtheria, scarlet fever, measles, whooping cough, mumps, scrofulosis and tubercular affections, rickets, etc The extreme incident of a mortality of 40 per cent from gastro-enteric disorders and the mortality of 2 5 per 1,000 from primary tubercular diseases of the abdominal lymphatics, can not fail to force themselves on our attention, and certainly points with more than mere suspicion to the fact that the morbific agent in these cases is introduced into the body with the food

Notwithstanding these startling arguments against artificial feeding, the facts are that there will always be a large percentage of infants deprived of their natural food, and the question therefore confronts us, What is the best possible substitute for human milk, the requirements of which are

1 That it must offer the same character and amount of nutritive elements, and in the same proportion as human milk

2 The nutritive elements must be present in the same assimilable form, of the same consistency, and should be introduced into the stomach at a temperature not less than 98 degrees F by means of suction and at proper intervals

3 This substitute must not contain any morbific or infective agent, whether originally present or introduced during the preparation or keeping of the same A moment's reflection upon the physiology of infantile digestion will at once suggest the propriety of rejecting all farinaceous foods before the expiration of the tenth month, except in very limited quantities, and previously converted into maltose by boiling as in barley water, but as milk is the natural food of all mammalia, few will be disposed to doubt that some modification of cow's milk offers the best possible substitute

Comparison of cows' milk and human milk the average composition of

	Albuminoids	Fat	Sugar	Salts
Cows' milk is	3 76	3 75	4 42	0 68
Human milk	2 00	4 13	7 00	0 20

Human milk contains, therefore, less albuminoids and salts and more sugars and fats, there is also a decided difference in the quality of the casein of the two secretions The addition of dilute acid to cow's milk precipitates the casein in hard coagula or lumps, while in human milk it separates into a fine powder giving the appearance of light flocculent curds, which readily dissolve in an excess of acid Since the coagulum in the same quantity of human milk is but one-fifth as large as that of cow's milk, this difference, which is solely one of compactness and solubility, can not fail to influence the digestibility of the two secretions, and explains at once why even moderate quantities of undiluted cow's milk are liable to overtax the digestive apparatus of the infant (Leeds, Starr, etc) In addition to this, and perhaps greater in importance, is the fact that human milk from a healthy subject rarely contains any micro organisms, while cow's milk is never free from bacteria and may moreover be the vehicle of infectious germs and other morbific agents. Apart from the fact that unscrupulous dealers not infrequently lower the nutritive value by skimming or watering the milk, Dr. Busey and myself in a joint contribution have elsewhere pointed out how the quality of the milk may be impaired by improper food and care of the animals, and how the milk may produce mischief if derived from animals while being treated with strong remedial agents, or as the product of diseased animals, especially those suffering from inflammatory lesions of the udder, tuberculosis and other communicable diseases. We have collected 138 epidemics of typhoid fever, 74 of scarlet fever and 28 of diphtheria, which have been caused by infected milk, and indicated the various ways by which it is possible for disease germs to be carried in this way. Permit me to direct your attention to a very common milk fault, which may be considered a source of constant danger in infant feeding and perhaps the most important factor in swelling the mortality rates of our helpless babes.

Every consumer of milk has doubtless observed the presence of more or less foreign matter found at the bottom of the vessel or bottle in which it is kept—indeed it is a matter of such common occurrence that it hardly excites our attention. Professor Soxhlet was perhaps the first to point out that these deposits are largely made up of excrementitious matter from the cow which, adhering to the udder of the animal, gained access to the bucket in the act of milking. Professor Renk, of Halle, brought this subject to the attention of the Section of Hygiene at the International Medical Congress in 1890, and few of his audience are likely to forget the valuable object lesson presented by him, consisting of filtrates of milk samples from different German cities, each representing the amount of filth contained in a liter of milk, and furnished at once a positive index of the degree of cleanliness observed at the various milk farms. The average weight *dried* at a temperature of 212 degrees F., of these sediments was 3.8 mgrs. at Leipzig, 9.0 mgrs. at Munich, 10.3 mgrs. at Berlin, and 12.2 mgrs. at Halle. These filtrates were so disgusting in appearance that we were not disposed to accept them as a standard for American milk, and with the courteous consent of the Health Officer, Dr. Woodward, Professor Hurd prepared filters from twenty-four specimens of Washington milk, taken at random, with the result that they presented even a greater amount of impurities, weighing all the way from 5 to 30 mgrs. per pint or quart, and as fecal matter contains about 85 per cent. of moisture, the weight of undried filth in the maximum specimen would have been about 180 mgrs. per quart.

Now it is not at all likely that the average American housewife would permit any one to throw this amount of filth into her milk pitcher and yet, practically, we suffer it to be done, and there is no law to prevent it. If these sediments are subjected to microscopic examination, we will find, as shown in the micro-photographs, prepared through the kindness of Dr. Reed by Dr. Gray, of the Army Medical Museum, that they are composed of epithelial *débris*, hairs of the cow, excrementitious matter, vegetable cells and fibers, organic and inorganic dust particles, bacteria, fungi and spores of every description, fully 90 per cent. of the bacteria found in such specimens are fecal bacilli, all of which is not only disgusting but extremely suggestive of danger. We know that the number of microorganisms in such milk is largely increased and bacterial development and consequent decomposition is materially hastened in such a medium. Dr. Plant, of Leipzig, found, as a rule, that in warm weather the so-called fresh milk delivered in the morning has already passed the period of incubation and is unfit for use by young children on account of the germ development, and of forty-seven infants whose milk supply was carefully investigated by him, eighteen developed digestive disorders and six died.

The greatest danger from milk of this class is the possible presence of tyrotoxicon and other bacterial products. Professor Vaughan believes that the former poison is developed by the growth of a germ which, under favorable conditions, multiplies very rapidly. The presence of the very filth referred to, a summer heat, and the pernicious habit of placing the milk before cooling in covered cans or bottles, perhaps dirty beside, constitute favorable environments for the production of bacterial toxins. The relation of this poison and of milk bacteria to cholera infantum and the summer diarrheas in bottle-fed children is gaining ground and will doubtless result in a great reform of our milk establishments.

Cow's milk, no matter how great the care exercised in milking, contains the germs which bring about fermentation and decomposition. These bacteria of different species abound in the atmosphere whenever the temperature is above 60 degrees F., cling to the udder and teats and even invade the lacteal ducts and finding there an excellent culture tube, multiply with great rapidity. Dr. Schultz has shown that the first half gill or so of milk obtained from the cow may contain 1,360,000 germs per cubic inch, while the milk drawn later is free from bacteria, hence we may safely conclude that the bulk of these organisms get into the milk from external sources, such as the air and dust of the stable, the hands and clothing of the milker, the hair or udder of the cow, the hay and straw, and last, but not least, the water, in which the milk vessels are washed, and with which the milk is not infrequently diluted.

Sedgwick and Batchelder have shown that with special precautions on the part of the milkman, the number of bacteria in fresh milk may not exceed 500 to 1000 per c.c., but when he uses the ordinary flaring milk pail, with more or less rough disturbance of the bedding and shaking of the udder, as many as 30,500 have been counted in 1 c.c. When we recall the fact that these germs during the heated term multiply with alarming rapidity, so that the average sample of Boston milk contains as many as 2,300,000 bacteria per teaspoonful, many of which are capable of evolving poisons, we can readily appreciate how the injection of such milk may give rise to the so-called summer diarrheas of infants and swell their mortality.

It has been proved, bacteriologically, that milk is not only a favorable culture medium for many saprophytic germs, but also for the germs of typhoid fever, erysipelas, tuberculosis, glanders, diphtheria, pneumonia streptococci and other pyogenic organisms, and this fact alone points at once to the necessity of a rigid control of our milk supply.

A review of the evidence on milk contamination, both in this country and Europe, shows that the laws which have been enacted to protect the public, deal largely with the prevention of milk sophistication, and even in this respect have fallen short of their aim Indeed, it is doubtful whether legislation in matters of this kind is as effective as public education The importance of a pure milk supply was recognized as early as 1878 in connection with some of the milk-cure institutes in Germany The system then originated has been improved by time and experience, and lately introduced into Boston, New York and Philadelphia, and appears to offer, by trade competition, the best solution of an important problem, those of you who are familiar with the surroundings of our milk farms and the habits of the average dairy employes need no arguments for the necessity of sanitary reform No family ever thinks of employing or keeping a cook afflicted with a communicable disease, and yet not the slightest restriction is placed, or question asked, about the persons who handle our milk supply, which is notoriously one of the most sensitive and susceptible articles of food to contaminating influences, but the absolute necessity of such milk laboratories are based upon the following facts

1 It has been demonstrated that milk may be morbific by reason of an abnormal number of ordinary milk-bacteria and the presence of saprophytic germs capable of producing toxins, such as tyrotoxicon, resulting in cholera infantum and other gastro-enteric diseases

2 Milk may be rendered unfit for use by reason of improper food and care of the animal, or while the animal is being treated with arsenic, copper, iodin, lead, mercury, tartar emetic, aloes, atropia, colchicum, croton oil, senna, strychnin, salicylic acid, turpentine, veratrum viridis and other remedial agents

3 Milk itself may be morbific as the product of a diseased animal Dr Busey and myself have elsewhere pointed out that inflammatory conditions of the udder and teats, especially the condition known as garget, are doubtless responsible for a large number of cases of pseudo membranous diphtheria and other septic infections The milk of animals suffering from acute specific enteritis, puerperal and other septic fevers, foot-and-mouth disease, cowpox, anthrax, pleuro-pneumonia, rabies and tetanus has also been known to prove injurious to the consumer

4 It has been proved by Ernst, of Harvard, that three out of twenty-five samples of Boston milk transmitted the germs of tuberculosis in the animals experimented upon, and Dr Fries found that the ordinary market milk of Copenhagen proved infectious in six out of twenty-eight rabbits, showing a corresponding degree of danger to delicate infants, and of which Dr Busey and myself have collected a large amount of clinical evidence

5 Milk may acquire infective properties after it leaves the udder of the animal, in support of which Dr Busey and the speaker have tabulated 138 epidemics of typhoid fever, 74 of scarlet fever and 28 of diphtheria, the analysis of which showed that the poison may reach the milk by soakage of the germs into the well water with which the utensils are washed, or by the intentional dilution with infected water, that the infection can be conveyed by animals wading in sewage polluted water, or by the dairy employes acting as nurses, or suffering themselves from some mild infection while continuing their usual duties, or are convalescents from the disease, that infection has taken place through the agency of scrubbing brushes, flies and other insects, exposure of the milk in sick rooms, or washing the patients with the same cloth used in wiping the dairy utensils Surely this is sufficient evidence, enough to show that something should be done to protect the public, and I believe this can best be accomplished by encouraging the establishment of milk depots, like the Walker-Gordon Laboratory of Boston, and of which Dr T M Rotch, of Boston, and Dr R T Taylor speak so approvingly

"The farm and herd are under the absolute control of the laboratory and are used for laboratory purposes only, the cows, their food, their stables, their pasture and their drinking water are subjected to the frequent, paid, critical examination of the best veterinary surgeon that can be procured in Boston The dairymen dress in white suits before milking, having each previously had a bath The milk pails are of glass, and the milk, after being aerated and cooled to about 44 degrees F in a tank of ice and water, is delivered at the laboratory in Boston within four hours after the milking The average and almost stable analysis of this original milk shows a percentage of

Fat	3 90
Milk sugar	4 30
Proteids	4 00
Salts	0 65
Total solids,	12 85
Total liquids,	87 15

"At the laboratory a ventilating engine keeps up a constant change of air and a hose keeps the enameled brick walls and stone floors wet to prevent contamination of the milk from dust, while it is being modified

"The whole milk, after being pasteurized, passes through a Stockholm separator, which makes 6,800 revolutions a minute and yields a cream of an almost constant 16 per cent fat It not only does this, but it removes all dirt that, from unavoidable causes, has gained access to the milk, thus yielding a clean skimmed milk practically free from fat, only 0 13 per cent remaining

"The modifier has, as a result, stable component parts of the original milk to work with, made up by analysis as follows

	Fat	Sugar	Proteids
Cream giving	16 00	4 00	3 60
Skimmed milk giving	0 13	4 40	4 00

"In addition to this, the modifier has a 20 per cent solution of sugar of milk, freshly prepared with distilled water each day, and is therefore able to put up correctly a prescription which calls for certain percentages of fat, sugar and the albuminoids After copying the formula or prescription in a book kept for that purpose, the "modifier" picks up a basket with as many compartments as meals are ordered, and fills each compartment with a tubular bottle holding the number of ounces ordered for each feeding After mixing the ingredients *en masse*, as ordered, each bottle is filled and the basket passed to the stopper, who plugs it with cotton The whole is then pasteurized for half an hour, and after proper labeling the basket is ready for delivery The delivery wagon is divided into two compartments, the back which is lined with zinc and easily cleaned is for the fresh milk and baskets, and the front for soiled tubes, baskets, etc, which are sterilized at the laboratory before being taken into the modifying room " (R F Taylor)

For a long time it was assumed that the composition of human milk varied with the age of the child, but Professor Leeds' long series of analyses show that after the function of lactation is once fairly established, the composition of woman's milk remains practically the same, and while the child receives more nutriment, day by day, it is in consequence of larger doses, rather than of a stronger quality This is quite in harmony with reason and common sense

Now if we wish to order a humanized milk as prepared at these laboratories, say for a child one month old, we would order the following mixture

Cream	f℥vi	180
Milk sugar solut 20 per cent	℥vi	180
Skimmed milk	℥ivss	135
Lime water, 1-20	f℥i	30
Distilled water	f℥vi	180

This is divided into twelve feedings, 2 ounces each As the infant grows older, the intervals are lengthened and the doses increased A child from two to five months old should receive eight feedings of 4 ounces each, and a strong child from five to eight months old, may receive from 6 to 7 ounces at each of the eight feedings, according to the indications which are best studied by the weight chart Professor Rotch uses lime water for the purpose of partially neutralizing the acidity of the gastric juice, in consequence of which the casein coagulates more slowly and the formation of firm undigestible curds is thus prevented Professor Leeds, instead of lime water, strongly recommends the addition of peptogenic milk-powder, which is a preparation of pancreatic lactose and alkalin milk salts, originated by Fairchild Brothers & Foster of New York

There is nothing strained in the requirement of an ideal milk supply, as good and sufficient reasons have been given, and by means of which we may hope to obtain such a standard of milk as will not only effect a decided reduction in infantile mortality, but will render the dissemination of infectious diseases through the milk supply a matter of history only Apart from these advantages the proper way to manufacture condensed milk suitable for infant feeding is to modify the milk before evaporation, a plan which, as far as I know, has not been attempted and is urgently called for

In the meantime, it will be well to educate the public in the matter of milk sediments, which can readily be seen at the bottom of the bottle after a few hours standing If we tell our dairyman the source of this pollution and how it can be prevented, something will be accomplished No milk supply is absolutely safe without pasteurization , and for infant feeding, until we can do better, I advise the following combination recommended by Professor Leeds

Milk	½ pint	240
Water	½ pint	240
Cream	2 ounces	60

Peptogenic milk powder one large measure This mixture should be placed on a hot range or gas stove and with constant stirring slowly heated for ten minutes to bring it to the boiling point , it is then removed and quickly cooled, and should be kept on ice and again pasteurized before feeding While milk thus prepared can never take the place of breast-milk from a healthy mother, it is very near in all respects to human milk and is perfectly sterile, as far as the ordinary disease germs are concerned

Prevention of disease is perhaps the central idea and object of sanitarians, but as hygiene also deals with the art of improving health, the question of a pure milk supply is not only important in the feeding of infants, but also the sick and invalids, and I trust, therefore, one of general interest to the profession

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A CONTRIBUTION TO THE STUDY OF ATRESIA OF THE UTERINE CANAL AFTER THE MENOPAUSE, WITH A REPORT OF THREE CASES

Read before the Medical Society of the District of Columbia June 12 1895

BY HENRY L E JOHNSON, M D

MEMBER OF THE FIRST PAN AMERICAN MEDICAL CONGRESS LATE VICE PRESIDENT OF THE WASHINGTON OBSTETRICAL AND GYNECOLOGICAL SOCIETY PROFESSOR OF GYNECOLOGY IN THE MEDICAL DEPARTMENT OF THE COLUMBIAN UNIVERSITY DIRECTOR OF THE GYNECOLOGIC CLINIC IN THE CENTRAL DISPENSARY AND EMERGENCY HOSPITAL ETC
WASHINGTON D C

Some years ago, when I was learning my first lessons in clinical gynecologic practice in a hospital devoted especially to that department of medicine, I had the good fortune to see and make the diagnosis of atresia of the vagina with retention of menses in a young woman, and later on, a case of atresia of the cervix uteri in an old lady who had passed the climacteric period several years In the first case, operation was had, which resulted in cure The second case presented many symptoms, some local, but particularly manifested in the nervous system She was treated by medicines only and was not accorded an operation, and because no improvement followed was discharged from the hospital as a malingerer After several years of invalidism she died of some " obscure disease "

I was taught that operation in such cases was contra-indicated, because menstruation had ceased, fluid accumulation being impossible, and surgical interference was attended with much danger and a high mortality I will ask the society to bear with me while I give the history of some cases in which atresia of the cervical canal existed and for the relief of which operative interference was instituted with good results The bibliography on the subject is also presented for your consideration, and you will see that the subject has not received the attention which it deserves when you learn the number and standing of the writers who make no mention of the condition

HISTORY OF CASES

Case 1 —On March 21 of the present year, I was consulted in my clinic at the Central Dispensary and Emergency Hospital by Mrs L , age 54 years, white, married, one child, no miscarriages She was born January, 1840, enjoyed good health until 1866, though always thin and never very strong Family history excellent First menstruated during the thirteenth year that function being normal in every particular Married in 1863, and in due time was delivered of a healthy child Labor and puerperium normal Shortly after death of child three years later, she first complained of 'womb trouble" and consulted a number of physicians with more or less relief but was never entirely cured Menses ceased in 1886, since which time she has never been well In July 1887, after investigation and consultation she was committed to the United States Hospital for the Insane, and there treated for acute melancholia with hallucinations of persecution She was shortly discharged, relieved but not cured At that time she was very fleshy and bloated notwithstanding the fact that she frequently refused her food One year later she returned voluntarily to the hospital seeking admission in order to escape imaginary persecutors She was not re-admitted because of lack of authority She was at that time very thin and anemic Since the cessation of the menses she has complained almost constantly of backache, pain in lower abdominal region, bearing down' frequent and painful urination, constant leucorrhea with irritation and excoriation of external genitals Loss of appetite, coated tongue, indigestion, nausea, vomiting, meteorism and constipation, palpitation of heart, irregular pulse and vertigo Occasional fever, chills, and sweatings, nervousness, insomnia, prostration, loss of flesh, alteration in functions of special senses (sight and hearing), slowness of speech and mental operations Numbness, trembling and twitching in limbs Hysteria, hallucinations of impending danger and persecution and of sight and hearing

Examination very fat, color bad, pale and sallow, tongue coated and trembling, hands trembling, pulse rapid Is very nervous Abdomen enlarged and distended with gas, perineum lacerated to second degree, prolapse of mucous membrane of urethra, vagina inflamed, muco-purulent discharge, and prolapse of anterior and posterior wall Cervix uteri not discoverable by sight, entirely obliterated, no trace of os can be found, the supravaginal portion of cervix, however, can be determined by touch Uterus small, but larger than normal at her age, soft, retroverted, fixed, tender on pressure Both tubes enlarged, fluctuating, fixed and tender on pressure Diagnosis atresia of cervical canal, with retained fluid Operation decided upon

On March 24, in presence of some of the college class, I seized the vault of the vagina at the site of the cervix with a volsellum forceps and introduced a curved bistoury about two inches and a half deep, into the tissues where I had located the cervical canal This was followed by an evacuation of about two or more ounces of greenish pus more or less offensive in odor Subsequently irrigating the vagina with antiseptic solution and applying antiseptic applications on pledgets of sterilized cotton Drainage of pus continued for two weeks with the occasional passage of hard inspissated lumps of pus and epithelium Marked improvement in symptoms followed, with reduction in size of the tubes and uterus

April 4, in the presence of some of the hospital assistants, I removed a ring of cervical tissue from around the incisson, making an oval opening considerably larger than a normal os The mucus membrane intra and extracervical not stitched together, but the space allowed to heal by granulation Shortly afterward all nervous intestinal and circulatory symptoms disappeared, and patient felt quite well The local condition was much improved, though the uterus is still retroverted and somewhat fixed This condition had evidently existed for a long period and has been a most important factor in the causation of her varied and numerous symptoms, in fact, it might be no exaggeration to infer that the local condition has been the only lesion Within a few weeks, a prominent gynecologist here, after local examination, pronounced her free from any uterine disease and transferred her for treatment to a specialist in nervous diseases

It is interesting to note the number and skill of the physicians who have at different times had charge of this case, none of whom, however, discovered the nature of the malady This failure to recognize the lesion is due almost entirely to the lack of, or faulty teaching in, the text-books, and it is hoped that this contribution will stimulate special study of these post-menopause cases

Case 2—Consulted me at the hospital on June 6 last, Mrs W H, white, age 50 years, widow about one year, one child after marriage about thirty years ago Labor normal, no miscarriage, menstruated between fourteenth and fifteenth year Always strong and healthy and never had any womb trouble, so far as she knows Never had a vaginal examination made since the birth of her child Menses absent about four years and been sick during that time Complains of backache, soreness in walking, bearing down pains, frequent urination and leucorrhea, loss of appetite, indigestion and constipation Is very nervous and hysterical, with numbness and twitching in limbs, has been losing flesh for some time and can not sleep at night, has been having convulsions at intervals of two or three months for the past two years During the past four years she has consulted a number of physicians, all of whom told her she had no womb trouble and none of them thought it necessary to make a vaginal examination, because "she had passed the change of life," and as they thought, gave no symptom of womb disease Examination partial laceration of perineum, vagina inflamed, uterus small, soft and boggy, atresia of canal at internal os Sound forced through obstruction and two or three ounces of muco-pus evacuated Patient felt relief at once and described her sensation as if some tension or pressure had been removed She has continued to improve and now feels better than she has for years The same subsequent treatment was followed in this as in the preceding case

It is fair to assume that this condition exists more frequently than is usually supposed, and many similar cases may be under treatment to-day in the asylums for the insane The menopause being unquestionably a physiologic process should not be attended with the extraordinary symptoms which we witness in so many cases, the exception being found, I believe, in those where the normal changes are interrupted or modified by pathologic conditions

Clinically, all women passing through the change of life or menopause, do not have serious symptoms and when exceptional cases are observed, we should conclude there is a cause for their complaints, and a thorough local examination should be instituted In this department of medicine we should always bear in mind the possibility of this condition and its importance, when the lesion itself will be easily discovered and cured

PATHOLOGIC SPECIMEN

The unusual growth which I removed to-day, I will present for your consideration, because it presents an atresia of the cervical canal and obliteration of the infravaginal portion of the cervix and, practically, an atresia of the vagina at its extreme upper portion

Mrs B, age 58 years, married, several miscarriages Been in ill health for sixteen years Never had any flooding spells Has had an enlargement of the abdomen for years but never knew until now she had a tumor Has not menstruated for five years and was very irregular for five years previous Had a slight muco-sanguinous discharge two months ago, which lasted two or three days Has been confined to bed for six months on account of pain in abdomen and neuralgia of face Examination abdomen enlarged to size of nine months' pregnancy by a large irregular fluctuating nodular mass, which is almost entirely confined to the right lateral portion of the abdomen and extending from deepest pelvic region to diaphragm No trace of the cervix or os can be found From absence of flooding, the soft, irregular and fluctuating character of the mass and its location, principally in the right side and absence of cervix and canal, I diagnosticated multilocular cyst of right ovary, and excluded the probability of fibroma Just before making the incision, however, I gave reasons for excluding fibroid tumor, extraperitoneal (so-called abdominal) pregnancy, but admitted the possibility of the uterus being distended with fluid because of atresia of the cervical canal, though from the general character of the growth I did not believe it uterine, thinking that organ was atrophied On section mistake in diagnoses noted

Enlarged multiple fibroid was found with degenerated interior containing fluid, about two quarts offensive pus A soft, stringy, friable mass was discovered growing from posterior surface of uterus, completely filling up the pelvic cavity and forcing the viscera above The right Fallopian tube was about ten inches long, having attached to its fimbriated extremity a large fibroid ovary Two large soft masses containing fluid were next reached The first attached to the fundus uteri, the other superimposed upon the first, and attached firmly to the diaphragm above The peritoneal cavity was distended with a large quantity of cherry colored fluid The masses were attached or adherent to themselves, the parietal, back, and pelvic walls, omentum, liver and intestines The adhesions were freed, in some places thin layers of the cyst wall were removed and left attached to the intestines, complete separation being impossible Notwithstanding the extensive adhesions neither omentum or intestines were injured The tumor was delivered and the uterine and ovarian arteries ligated The mass was then easily excised, no hemorrhage following A very excellent intraperitoneal stump was formed and covered by peritoneum, a small fibroid being removed from the stump posterior to the bladder The cavity was perfectly dry when the incision was closed and the patient was placed in bed Profound shock followed, patient dying within an hour, never regaining consciousness The operation lasted one hour and forty minutes Tumor weighed exclusive of fluid thirty seven pounds

After opening the abdomen the operation might have been abandoned, but the patient requested that the growth should be removed at all hazards This case is a most instructive one, and shows how atresia with obliteration of the cervix may prevent an accurate diagnosis being made, and it is a particularly fit specimen to accompany this contribution After its removal the uterine cavity was found very much distended, presumably with gas, physometra, contained no fluid and measured nine inches in diameter But for the atresia and obliterated cervix the sound would have been of great assistance in diagnosis, and would have cleared up considerable doubt

The report of the pathologists of the hospital, Drs Gray and Parker, and that of Dr Walter Reed, U S A, Curator of the Army Medical Museum, is herewith appended, together with the photographs of the growth made by Dr Church, the resident physician

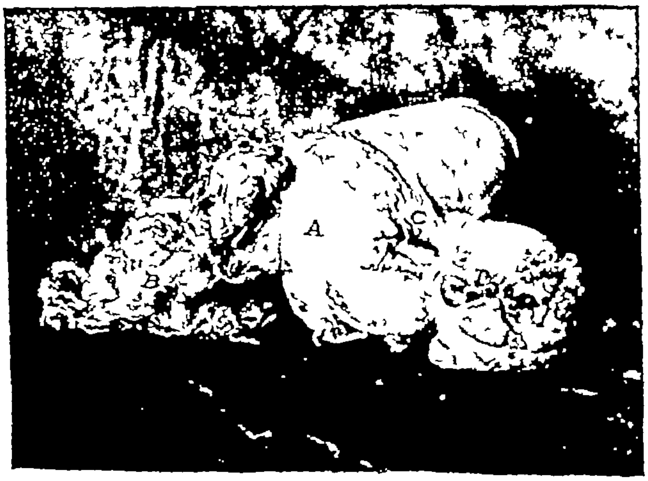

FIG 1 —View from under side
A Fundus of uterus B Pelvic mass from dotted line C Left broad ligament and ovary D D Masses attached to uterine fundus, and containing fluid

LIONEL LABORATORY, WASHINGTON, D C, June 28, 1895
Dr H L E Johnson

Dear Doctor —The sections from the tumor of uterus removed from Mrs B prove to be malignant in character The growth is a sarcoma of a mixed variety, it is composed of round and spindle cells of various sizes

The round white tumor which occupied the position of one of the ovaries is not malignant, it is a soft myxofibroma

Yours truly, W M GRAY,
Pathologist Central Dispensary and Emergency Hospital

WAR DEPARTMENT
SURGEON-GENERAL'S OFFICE, U S ARMY MEDICAL MUSEUM AND LIBRARY

WASHINGTON, D C, July 3, 1895
Dr H L E Johnson 1400 I St N W, Washington, D C

Dear Doctor —I beg to submit the following report of an examination of the specimen of uterus and appendages with tumor mass, which was received at the Museum on June 26, 1895

Dr Lamb furnishes me with the following gross description of the specimen, the uterus, which has been removed at the internal os, is somewhat pyramidal in shape and measures 6 5 x 6 5 x 7 The enlargement is due partly to hypertrophy and partly to the fibroid growth, which latter is situated in the left wall and projects into the flattened uterine cavity Within this fibroid there is a large cavity, with rough inner surface, filled with a recent blood clot Projecting upward from the fundus are several large tumor masses, one of which is hollowed out into a cyst, with thick wall and rough inner surface, the latter being overspread with blood vessels The right tube is adherent by its fimbriated end to the ovary, left tube normal Right ovary converted into a firm fibrous looking mass, 3 x 2 x 2 inches in diameter, left ovary normal in size and structure, shows remains of corpora lutea Posterior to the lower end of the uterus is a large shredded and brittle mass, covered on its upper side by the peritoneum of Douglas' cul de sac

Microscopic examination of sections taken from different parts of the tumor mass show the structure of a mixed cell sarcoma, richly supplied with blood vessels In several parts of the section there are seen cross sections of blood vessels with intact intima and which are surrounded by dense masses of round and spindle shaped cells, giving the picture of an angiosarcoma Microscopic examination of the small tumor mass occupying the position of the right ovary proves it to be a myxofibroma, there are no remains of ovarian structure to be seen Very respectfully,

WALTER REED,
Surgeon U S Army, Curator

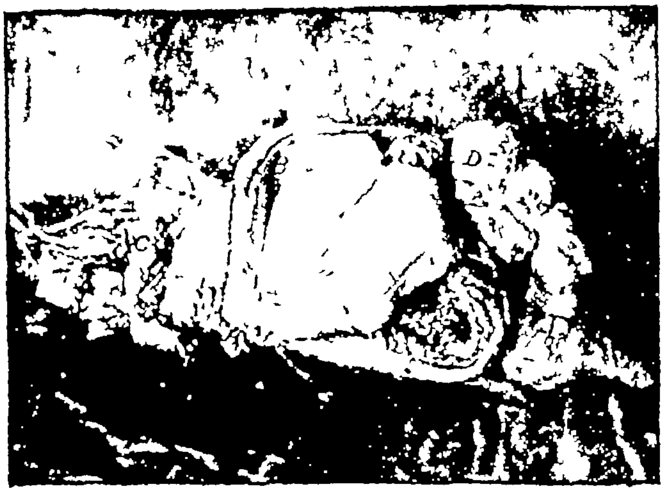

FIG 2 —Left lateral view
A Cervix at point of amputation and atresia B Cavity of uterus laid open C Pelvic mass from dotted line D D Masses attached to uterine wall and containing fluid E Cavity of abscess containing about two quarts pus F Pedicle attached to diaphragm

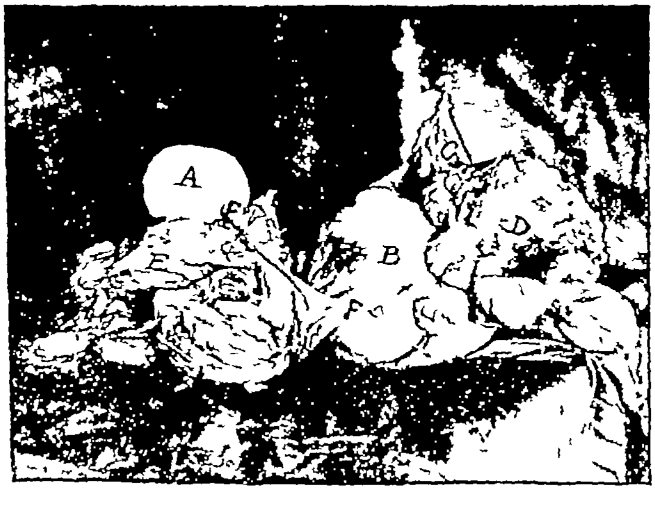

FIG 3 —Right lateral view
A Fibroid ovary B Uterus C Normal ovary and broad ligament D Cavity of abscess E Pelvic mass from dotted line F Long fallopian tube

CAUSE AND FREQUENCY

The question will be asked, How is the atresia produced, and how often does it occur? It is caused physiologically by the reduction in size of the uterus which takes place in normal atrophy, where the organ is reduced in some cases to a mere nodule Pathologically, from cancer, tumors, such as fibroids, catarrhal and other inflammations of cervical endometrium, extension of vaginitis into cervix (particularly senile vaginitis), small polyps causing endocervicitis, post-diphtheritic inflammations, the use of strong caustics, actual or electric cautery, trauma, and contraction or cicatrization following trachelorrhaphy

VARIETIES

The atresia may occur at the external os or internal os, or may include the entire cervical canal, and in some instances, the cervical canal is obliterated, together with the vaginal portion of the cervix, so that no trace of the cervix is to be found through the speculum, and its site is with difficulty found upon digital examination

DIAGNOSIS

The diagnosis is based upon the age and history, of the patient, the size and consistency of the uterus and tubes, and the obstruction discovered by the sound, or the absence of the cervix and os as described above

TREATMENT

Open the canal with sound or knife, followed by antiseptic irrigation and douches, keep the canal patulous, by dilation, or excision of cervical tissue when necessary Operate under strict modern methods Treat the cavity of the uterus locally with antiseptic applications and irrigations

DANGER

Danger arises from faulty asepsis, and perforation of organ by careless or bungling operators Failure to determine accurately the size of the uterus and direction of the canal will lead to error

Maryland and Virginia Medical Journal Richmond 1860, vol xv, pages 292–295, Art 4 Report from the Infirmary of the Medical College of Virginia (service of Dr McCaw), by Dr Thomas Hunter resident physician ' Case of Occlusion of Os Uteri " A negro named Agnes, age 47, *attempted an operation by a long curved trocar introduced* by Dr McCaw through the speculum and made to enter the uterus about the center of its os, was pushed to depth of one and one half inches without entering the cavity of the womb No further attempts were made 'and moreover, as that period of life had arrived when the menstrual function ceased, Nature herself might relieve her without the pain and risk of an operation " Had two attacks after this Ends article as follows 'In a few days after her last attack she left the Infirmary She has not been heard from since but in all probability she has been relieved from all further trouble by the total disappearance of the menstrual function "

Transactions Obstetrical Society of London for the year 1877, vol xix pages 176–177 ' *A Case of Suppuration of the Uterine Cavity resulting* from Occlusion of the Cervix " Dr Albert Lewis Galabin " Mary K, 43 years old, had been widow thirteen years Has had eight children and two miscarriages Menstruation ceased ten years ago Punctured from the vagina by a small trocar and fluid evacuated was pure pus Symptoms of general peritonitis soon came on, and the patient died after a few days "

The specimen exhibited shows the occlusion to have been due to the presence of cancerous deposit beginning about the internal os and not manifestly affecting the external part of the cervix

Transactions of the American Gynecological Society for the year 1879 Boston, 1880 vol iv pages 428-482 ' Premature Senile Obliteration of *the Uterine Cervical Canal,*" by Dr Henry Campbell, Augusta, Ga

Case 1—Senile obliteration of the cervical canal with accumulation within and distension of the uterine cavity Evacuation by incision and dilatation The patient a virgin Called Aug 4, 1876, to Miss N H, age 55, in consultation with Dr Amory Coffin, of Aiken, S C Operated Discharge intolerably offensive it more nearly resembled rotten egg effluvium than anything else amounted to nearly eight ounces Jan 26 1877 Miss N H came to Augusta for further treatment Stated the offensive discharge from vagina had continued but a few days after operation Jan 26 operated again, in ten days uterus appeared to be normal July 7, 1877, she was in an extremely low condition Died from irritative fever and exhaustion soon after

Case 2—Senile obliteration of cervical canal Patient a multipara April 4 1878 Mrs L Z, of South Carolina age about 58 years, mother of eight or ten children Youngest about 16 June 26 1878 Operated evacuated fluid nearly sixteen ounces about consistence of thickened milk, closely resembling in its offensive odor that previously described Recovery *Health* perfect in every particular

Atlanta Medical Register, 1881 82, N S, vol 1, pages 65 78 'Atresia of the Vagina and Uterus " A Clinical Lecture by Dr A F Erich, Baltimore, Md Professor of Diseases of Women, College of Physicians and Surgeons, Baltimore Surgeon in charge of the Maryland Woman's Hospital etc, says "Women who have passed the menopause sometimes suffer from an accumulation of mucus or muco purulent fluid in the uterus, due to the atresia of the os following endometritis or the application of caustics to the cervical canal In other cases the os may be closed by the formation of an epithelial stratum resembling a false membrane, completely occluding the os This condition is not infrequently seen in prolapse of the uterus *A sound can generally be pushed* through the obstruction and the passage afterward dilated " The indications in all cases of atresia accompanied by symptoms are to empty the retained fluid keep the tract pervious and restore if possible the functional capacity of the sexual organs

Chicago Medical Journal and Examiner, 1883 vol xlvi, pages 394 396 "Two Cases of Stenosis Uteri with Symptoms of Locomotor Ataxia," by Dr O Stroinski

Case 1—Mrs M N 52 years of age Operated Perforated cervix with trocar and dilated with laminaria tents then introduced intra uterine pessary After six weeks the phenomena of locomotor disturbance began to disappear and micturition was normal

Case 2—Mrs Anna W, 68 years old, unable to leave bed for the last three months Operated Improvement was more rapid in this case able to do housework after two months Ends as follows It is probable that pressure on the uterine nerves, caused by the agglutination of the uterine walls acts reciprocally on the nervous system of the abdominal part of the body and on that of the spinal cord "

Transactions of Obstetrical Society of London for 1885 London, 1886 Vol xxvii, pages 81 83 "Distension of Uterus from Partial Obstruction of Cervix." Dr A L Galabin showed the uterus of a woman, age 61, in which distension of the body with muco sanguineous fluid was found in association with a partial obstruction of the cervix The patient died six days after the operation for cancer of the breast The canal was obstructed by a median septum about three *quarters of an inch long*, occupying the lower part of the cervix and the summit of the vagina "

Clinical Lectures on the Diseases of Women, delivered in Saint Bartholomew's Hospital, by Dr J Matthews Duncan, 4th edition, London, 1889 J & A Churchill Lecture II, 'On Retention of Mucus," page 65 'Atresia may occur at any part of the course of the genital passage and I show you here an example of what happens to be the commonest acquired atresia—atresia of the internal os uteri—coming on in old age, and producing in the specimen I show you, a pyometra, the body of the uterus being distended so as to be a hollow globe capable of containing a small apple "

Zeitschrift fur Medicin Chirurgie und Geburtshulfe, n f v 1866, pages 22 84, 91 100, by Prof Dr C Hennig, Leipzig "On *Atresia of the Uterus*" says ' But exceptionally one meets atresia after the climacteric period Although in old age cases occur very often in which the internal os comes together, but does not close entirely (*hydrometra ex involutione oriunda*) Of 100 females who have passed the fiftieth year, one will find about twenty eight with atresia of the internal os and, doubtless the period between 69 and 70 years as the most prolific for the above named anomaly to make its appearance Notwithstanding, I do not mean that one dare perceive senile atresia as a physiologic condition "

Allgemeine Wiener Medizinische Zeitung 1878, vol xxiii, pages 257 258, 270-271, 280 "On the Impassableness of the Cervical Canal and Its Treatment " by Dr A Tripier, of Paris "That the internal os of the cervix is commonly completely obliterated, which Moyer has already laid stress on, that this growing together appears to be normal in old women Guyon found it thirteen times in twenty uteri of women from 50 to 70 years old

'Ueber Atresia der Nichtschwangeren Gebärmutter," by Franz Reder, *University of Rebstock, 1860 (Inaugural Dissertation)* Mentions senile atrophy of the cervix producing atresia

"Ueber Atresia der Vagina und des Uterus," by Wright Barnum, University of Jena, 1891 (Inaugural Dissertation) Under "Results and Symptoms" he divides them into three groups, in the last of which (c) "Results of Atresia After the Menopause " he says 'In the third period we have as a sequel an accumulation of mucus or pus This is the favorite time for hydrometra This accumulation is serous, mucus, etc " He advises operations in such cases

De L'Atrésie du Col de L'Uterus " Thésis by Elisée Ribard, Montpelier, 1869 Gives two cases Female aged 55 years, atresia internal os, operation complete cure Female aged 58, atresia due to abuse of coitus she died and an autopsy was held when condition was found

'Sur les Rétrécissements de L Uterus " Thésis by Dr J Henri Pouillot, Paris, 1861 Mentions senile atrophy as a cause of atresia Gives a case in a woman of 50 but does not say that she had ceased menstruating

' Essai sur la Rétrécissement du Conduit Utérin, Considéré Principalment au Point de vue du Traitement " Par Godefroy Thermes, Paris, 1867 Gives a case of a woman aged 53 years who was suffering from stricture of the neck of the uterus, due to a fibroid tumor of the body which extended to the neck

Klinische Mittheilungen aus der ersten Geburtshilflich Gynäkologischen Universitats Klinik in Buda Pesth, Uber die Jahre 1874 82 Mit Kurzer übersicht uber die Jahre 1869-74 Herausgegeben von Dr Theodor von Kezmarszky, Stuttgart 1884 page 237, under 'Gynäkologische Poliklinick " had 660 cases Gynecological cases, 608 Uterine affections 421 of which 4 were senile atrophy of the uterus

Die Königliche Universitäts Frauenklinik in München in den Jahren, 1884 1890 Berichte und Studien Herausgegeben von Dr F von Winckel, Direktor der Klinik Leipzig, 1892

For 1884 1890 inclusive 896 patients in gynecologic portion In 1884 56, 1885, 128 1886, 171 1887, 163 1888, 160, 1889, 202, 1890, 191 No cases

OUT DOOR SERVICE

Jan 1, 1885 to Jan 1, 1886, 358 persons 1886 1890, 2,185 patients treated: in 1886 446 1887 394 1888, 311, 1889 433 1890, 551 No cases

Rendiconto delle Sale di Ostetricia e di Ginecologia (Anno Scolastico, 1882 83) dirette dal Dr Giovanni Cosentino *Professore Pareggiato di* Ostetricia nella R Universita di Palermo e Ginecologo Primario dell 'Ospedale Civico Redatto dal Dr Giuseppe Giglio Palermo, 1884 Consultazione Nell 'Ambulatorio Di Ginecologia Treated 419 cases No cases of atresia after menopause

'Manual of Gynecology," Hart and Barbour 4th edition *London*, 1890 pages 266-267 'Atresia of cervix is rare as a *congenital* condition It is more frequently acquired, and results from the following causes Adhesion of granulations in cervical catarrh (after menopause) and round the base of tumors The practical point for the practitioner to remember is that it occurs also as part of the physiologic changes which take place after the menopause, 28 per cent of women above 60 years of age have *atresia of the cervix* (Hennig) " Page 319 'Senile atresia of the cervical canal is the result of a localized chronic endometritis This is one of the physiologic changes which occur after the menopause In some cases, however, it becomes pathologic accumulation of mucus more rarely of blood, takes place above the obstruction "

'Diseases of Women," by Dr Alfred L Galabin 5th edition, London 1893 Page 80 'Acquired uterine atresia usually affects some portion of the cervical canal It may also be the effect of cervical catarrh through adhesion of the granulations formed on opposite sides of the canal, especially when the passage is no longer kept patent by the flow of menstrual blood It is not uncommon, therefore, *in old* women, especially when prolapse of the uterus exists." Page 82 "After the menopause the uterus may be filled by mucus fluid (hydrometra) a condition usually resulting from acquired atresia of the cervical canal I have met with one instance in which the uterus became largely distended by pus in consequence of an atresia produced by cancer about the internal os Advises operation

"Treatise on Gynecology—Medical and Surgical by Dr S Pozzi New York 1892 2 vols Vol I, pages 582-583 "Acquired atresia It may also follow the cicatrization of ulcers of the cervix coincident with senile atrophy of the uterus finally it may in old women be due to a tumor in the cervix or lower portion of the body of the uterus It may occur spontaneously in old age The results of this obliteration vary as the patient has or has not reached the menopause If she has ceased menstruation the lesion usually causes no disturbance unless some cause of septic infection exists in the uterine cavity, causing an accumulation of pus (pyometra) or gas (physometra) I have seen two cases of pyometra from cancer of the body of the uterus and fibroma in aged women The treatment in such a case consists in incising or puncturing the cervix if it be necessary to disinfect the uterine cavity and then in meeting the indications called for by an existing fibroma or cancer

A Practical Treatise on the Diseases of Women by T G Thomas 6th edition Enlarged and thoroughly revised by Dr P T Mundé, Philadelphia 1891 Page 220 gives as a cause of acquired atresia senile atrophy The second is so very common in old age that Hennig declares that out of 100 women who had passed 50 years of age about 28 (over a quarter) suffered from it Results It might at first thought be supposed that uterine atresia occurring after the menopause would be as it usually is before puberty a matter of no moment As a rule this is so but there are exceptions to both rules In the old women a watery secretion sometimes takes place giving rise to hydrometra suppurative action may occur creating pyometra Advises operation

"A Practical Treatise on Diseases of Women by Dr J Thorburn London 1885 Pages 151 152 'It also occasionally happens that menstruation having ceased the occluded uterus continues to secrete a quantity of mucus fluid, more or less watery, which distends the organ giving rise to the same physical signs as hematometra (hydrometra) and in still rarer cases this fluid is or becomes purulent (pyometra) or decomposes giving rise to the presence of gases (physometra)' Advises operation

"A Manual of Gynecological Practice" by Dr A Dührssen Translated by J Taylor F R C S and F Edge M R C P, F R C S, London 1895 Page 85 In old women an atresia of the internal os is found analogous to the kolpitis adhesiva *This leads to the collection of* mucus or pus (Hydro and pyometra) Page 88 'Atresia of the internal os is treated by simply passing a sound or trocar through the obstruction

Practical Manual of Diseases of Women and Uterine Therapeutics by H MacNaughton Jones M D M Ch F R C S I and E, New York 1884 Page 325 1 causation 2 acquired The causes producing acquired atresia are cervical endometritis senile atrophy Advises operation if hydrometra etc

An American Text Book of Gynecology—Medical and Surgical edited by Dr J M Baldy Philadelphia 1894 Page 86 "Hydrometra which is more likely to take place in women of advanced age is due to the retention of the secretions from obliteration of the canal"

"*Landmarks in Gynecology* by Dr Byron Robinson Detroit 1891 Vol II page 190 'Hydrometra—it is a condition of late life when senile or other degeneration arise in the cervix

'Hand Book of Gynecological Operations by *A H G Doran F R C S* Philadelphia 1887 Page 338 gives Breisky's operation for atresia of the cervix

"Diseases of Women" by Lawson Tait F R C S 2d edition 1886 Page 75, in speaking of hydrometra, says "It is a condition almost entirely confined *ex necessitate* to women who have passed the climacteric period of life, and it very rarely causes the uterus to reach any great size, because the greater part of the secretion of the *internal mucus surface* is capable of resorption leaving behind only the more solid elements of the mucus Simpson *narrates a case unusual for it* in which he drew off large quantities of serous fluid from the cavity of the uterus which had been distended to the size of the fifth or sixth month of pregnancy, the fluid being due to a cancroid tumor at the fundus In such a case the symptoms would be severe and would necessitate a careful examination The first thought would be to eliminate the possibility of pregnancy and then to open up the canal

"A Text Book of the Diseases of Women by Dr *H J Garrigues* Philadelphia 1894 Page 407 "Closure of the uterus (acquired atresia) but the uterus may also be closed later in life *acquired atresia* Although not so rare as the congenital form, the acquired is still a rare affection Etiology sometimes it is simply due to old age and is especially found in old women suffering from prolapse of the uterus After the menopause the atresia hardly gives rise to any symptoms unless it is complicated with some other disease of the womb, especially cancer or fibroma

"A Hand Book of the Diseases of Women Including *Diseases of the Bladder and Urethra* by Dr F Winckel of Munich Authorized translation Edited by Dr T Parvin, of Philadelphia 1889 Page 462 Among the numerous causes of these are advanced age Page 465 Or if there is a retention of the uterine secretion after the menopause the uterine walls are sometimes thickened but not infrequently they are much thinner than usual Page 471 recommends operation Does not cite any cases

"Encyclopedia *of the* Practice of Medicine," edited by Dr H von Ziemssen vol x 1875 Diseases of the Female Sexual Organs' by Prof *C Schroeder Erlanger* Bavaria Senile atresia is mentioned

Hand Buch der Krankheiten des Weibes nebst *einer einleitung* in die Physiologie und Psychologie des Weiblichen Organismus von Dr Johann C G Jorg Leipzig 1831 Page 825 *mentions* hydrometra as occurring in women after the climacteric due to stenosis and atresia recommends operation

Lehrbuch der Gynäkologie von Carl C Carus Wien 1820 Vol I page 277 same as above

Spiegelbilder der Gesunden und Kranken Vaginal Portion und Vagina von Dr J Heitzmann Wien 1883 Page 173 mentions it as producing hydrometra in women after the menopause

Die Frauenkrankheiten Ihre Erkennung und Heilung von Dr R Flechsig Leipzig 1885 Page 124 under stenosis and atresia of the uterus mentions hydrometra as occurring after the menopause

Frauenkrankheiten von Dr C G *Rothe Leipzig* 1890 Page 243 "*Atresia* due to senile atrophy of the internal os is *not* pathological Page 184 'Hydrometra occurs mostly in old women who after the menopause, have atresia of the uterus

Die Krankheiten der Frauen von Dr Heinrich Fritsch, Braunschweig 1886 3d edition Page 191 "In old women cervical atresia occurs but seldom at the internal os But here menstruation has ceased so back of the atresia we have an accumulation of either mucus or pus (Pyometra senilis) Advises operation (First edition translated by Isidore Furst Wood's Library, 1883)

Hand Buch der Krankheiten der Weiblichen Geschlechtsorgane von Dr Carl Schroeder Leipzig, 1890 Page 413 Atresia, mostly of the internal os we find in old women very often Hennig found it twenty eight times *in 100 women over 50 years of age* ' Page 417 'With hydrometra the symptoms are not so intense, since the accumulation follows more slowly and the atrophic non functioning uterus in the dilation of its cavity is not answered by contractions Advises operation

Lehrbuch der Frauenkrankheiten von Dr F Winckel Leipzig 1890 Page 59 Cause old age ' Page 607 *If hydro or pyometra, operate*

Compendium der Gynäkologie, von Dr J Heitzmann Wien 1891 Page 41 'In the climacteric, *atresia of the internal os does not occur* very often only mucus accumulates with little or no pain (Hydrometra senilis) contrary to this mostly through gonorrheal infection a condition is caused, by which an intense muco pus is found in the cavity of the uterus" (Pyometra senilis)

Traité Pratique de Gynécologie et des *Maladies des Femmes par le* Dr J de Sinety Deuxième edition Paris 1884 Page 220 quotes Hennig

Manual des Maladies des Femmes par A Lutaud 2d edition *Paris* 1891 Page [illegible] 'Uterine atresia is sometimes acquired

Traité Pratique de Gynécologie par Stéphane Bonnet et Paul Petit Paris 1894 Page [illegible] quotes Hennig advises operation in case of hydro or pyometra

Le Malattie della Donna Trattato Clinico Completo del Dottor Malachia de Cristoforis, 2d edition Milano 1885 Page [illegible] quotes Hennig same as above

The JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION vol xviii, 1892 pages 188-190 "Osteomalacia by Dr D S Lamb In the post mortem of a case made for Dr Mary Parsons found this condition and others in which the uterus was 2.25 inches long cervix normal lips still well marked abscess in fundus one inch in diameter *distinct from uterine canal* filled with cheesy pus wall of abscess thin, inner surface rough Each tube ended along side the fimbria in a cyst with chalky wall and yellowish cheesy contents the right cyst was one inch the left one fourth inch in diameter Ovaries atrophied smooth Some pelvic peritoneal adhesions This is a case attended by Dr Mary Parsons, the skeleton of which is in the Army Medical Museum catalogued as No 10 000 *Pathological Section* Its entire weight is only two pounds and thirteen ounces The patient was a white woman single and about 69 years old at death July 10, 1889 She had been sick twenty six years and confined to bed about twenty-*one* years The uterine specimen is catalogued No 10 011

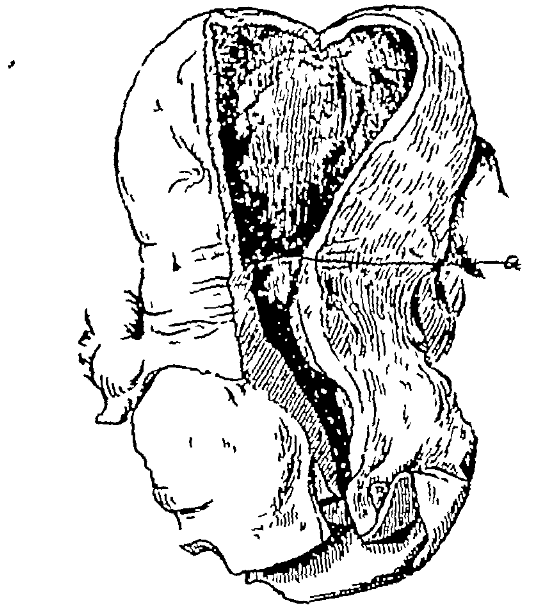

FIG 4—The uterus has been opened through the posterior wall
A Wall of abscess cavity separating the cavity from the canal below

NOTE—June 25, 1895 The abscess cavity is the much dilated upper portion of the uterine canal separated from the lower patulous and normal portion by the boundary wall of the abscess cavity In other words there is atresia of the canal caused by the *formation of the* abscess cavity wall as shown in the diagram D S LAMB, M D

(I would suggest that in the above mentioned case the atresia was not produced by the abscess, but on the contrary the abscess was produced by the atresia H L E J)

BOOKS CONSULTED IN WHICH THE DISEASE IS NOT MENTIONED

Dr Wm B Atkinson The Therapeutics of Gynecology and Obstetrics Philadelphia, 1880

Dr Headley W Balls The Evolution of the Diseases of Women *London* 1894

Dr G W Bratenahl and Dr Sinclair Tousey Gynecology

Dr N T Brewis Outlines of Gynecological Diagnosis Edinburgh 1894

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CONCLUSIONS

From what has appeared above we may draw the following conclusions

1 Pathologic atresia of the uterine canal after the menopause is a condition which exists more frequently than is usually supposed, produces symptoms which have not been thoroughly appreciated, and may lead to error in diagnosis in some cases

2 The subject has not been carefully studied, or correctly treated in the past

3 The symptoms mislead by directing attention to the nervous system more particularly than to the true seat of disease

4 Atresia, or more correctly speaking, obliteration of the uterine canal, is a physiologic condition, only after complete atrophy of the body of the uterus and its endometrium

5 The uterus, during the menopause, and until completely atrophied, should be kept under careful observation, all inflammatory, catarrhal, and other abnormal conditions treated and cured, and the canal kept pervious by the passage of a suitable sound to facilitate drainage

6 All cases of atresia of the cervix, where complete atrophy of the uterus has not taken place, should be operated upon at once, even in advance of symptoms

7 Operation is beneficial by preventing or relieving distressing symptoms, and is absolutely free from danger when performed with modern surgical precautions

8 Many obscure symptoms occurring during, and after, the menopause, are produced by retention of fluid and *débris* from atresia of the cervical canal, which can be promptly relieved by the treatment advised

9 This subject is of the greatest importance and deserves a thorough investigation by the medical profession

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PECULIARITIES OF COLOMBIAN LEPROSY

BY ALBERT S ASHMEAD, M D

NEW YORK

Leprosy in Colombia dates from very remote times, though no light is thrown over its origin According to Father Velasco, in the middle of the last century a lazaretto was founded in Cali

I find in an article of the *Anales de la Academia Nacional de Medicina*, Bogota, 1894, under the signature of Dr Alfredo Garcés, several points which represent Colombian leprosy in a rather peculiar manner

1 According to the information obtained from patients, and the opinion of the Doctor himself, the disease originates mostly, if not always, in a cold, exposure to rain, sudden cooling after strong perspiration, sojourn in damp rooms, especially during confinement, bathing in a brook being heated, passing from a warm climate to colder altitudes, etc These accidents are all followed by the wheals of urticaria From the urticaria, leprosy is developed Most of the patients attribute their malady to a cold Some say that they went out into the cold air, that they have been exposed to a draught, to a shower, that they have gone into the water while heated One of them said to me "I was sleeping in the evening, I was awakened suddenly and went out at once, heated and perspiring, into a cold hallway, I got a spasm

(urticaria), my skin thickened and my blood was corrupted ' Another said "While pregnant I lived in a damp room and was caught by a shower in crossing a courtyard, in the night my body was covered with wheals, I had fever and my blood was corrupted " Another said that she was grinding chocolate, and that she wetted her hot hands, that the hands thickened and were benumbed and that she got wheals Another, on her way, bathed in a brook, being much heated, and from that time she had thick feet and wheals One was a laundress, another a baker, another tapped liquors, etc In others the primitive cold is not discovered, but they have lived in contact with elephantiasis, or in rooms which had contained it Thus we see a mother and two sons affected, a father and three sons, two mothers each with her daughter, uncles with nephews One goes to the Valle del Caucas, he catches typhus there, he returns to Popayan and leprosy appears Another goes to the Valle del Patia, he returns to a cold climate and becomes a leper Others take a bath in Cauca or in Piendamo with their bodies heated, wheals come and the disease appears

2 In the general pathology of Colombia, scrofula is very common, "as common as tuberculosis is rare " Dr Garces says that he can affirm, surely not to exaggerate, that there is not in Colombia a family in which there is not at least one scrofulous individual In no place did he see so many strumous tumors of the neck, axilla and groin

"The gnawing lupus," says Dr Garces, "of slow and invasive march, appears frequently in its most alarming forms I have seen three patients in whom nearly the whole face had disappeared under the action of scrofulous ulcers, in another, the whole knee and part of the leg, in another, the face, the elbows and the neck had been invaded by lupus In the feet, in the legs, etc , are observed affections not unfrequently, and in a practice of six years I have observed not less than twelve lupi gnawing, most of them in women As to dermatoses of scrofulous nature, it is difficult to find a place where they are more frequent, eczemas, impetigos, purpura, breakings out on children's faces, acnes, are frequently observed Anemia and the lymphatic temperaments, with thick lips, stout and colorless forms, epistaxis, hemophilia are met at every step, in one word, scrofula reigns in Popayan, and its environs, as reign the paludic fevers in our heated lands (*terras calientes*), cholera in India, and yellow fever in New Orleans "

3 Garcés, while admitting the microbian theory, confesses that there is not one fact in support of it which might not be explained in some other manner

4 Leprosy is a disease of the nervous system, not engendered by microbes, followed by vasomotor disturbances, offering in a certain state a desired habitat for the bacillus, and afterward, susceptible of being propagated by the same microbe "We do not mean to evict the parasite from its domain, nor to deny its morbigenous action We want only to establish this clinical fact leprosy is a disease of the peripheric nervous system, which reaches the superficial nerves of some mucous membranes, through anatomic relations We can not be surprised that leprosy, being a disease of the nervous system, makes itself known chiefly by cutaneous lesions, for we see many of its affections accompanied by zona, pemphigo, trophic lesions, glossy skin, patches of anesthesia, etc "

5 In Colombia, scrofula is very often mistaken for leprosy, but the total absence of nervous disturbance is sufficient for the physician to make the right diagnosis

6 "There remains a disease rather common in Popayan which fills the public with terror, and gives to the subject the appearance of a leper, it is characterized by atrophies and reabsorption of the phalanges of some fingers and toes, by deformations, more or less important, which sometimes give to the extremities the form of a spider, of a claw, of an onion head, pes varus, globular in form, etc , mutilations which present zones of anesthesia and analgesia in distinct points of the extremities The lesions affect a certain symmetry and never pass from the foot, from the hand, or from the forearm, in no other part of the body is there observed anything abnormal, and those who suffer of such affection live long years without their disease advancing or generalizing itself They attribute their condition to a cold taken in their feet or hands when the body was heated I am not unaware that some of these subjects have become leprous afterward, but from this fact to the declaration that all do the same, there is a wide distance, patients like those of whom I have spoken are not lepers for me, as long as the microscope does not show in them the trophic lesions due to the bacilus of Hansen " Here is a case in point

DYSTROPHY OF EXTREMITIES

M P, aged 34, presents in the cheeks and on the forehead a rubicund color, and at that level the skin is rather thick Neither in the ears nor on the face, nor in any other part does it show tubercles nor even spots On the arms there are broad spots of a yellowish pink The right hand presents the following anomalies the interosseous muscles and the abductors of the thumb are in great part atrophied, the finger is almost without phalanx, and of the nail there remains only small fragments of the lunula, the finger seems thickened in its free extremity, looking like an onion's head, over the annular and middle fingers there is a pink spot, covered by some epidermic scabs, and over the nail of the middle there are well pronounced ulcerations, the annular and the little finger show a slight retraction of the flexor muscles of the phalanx, the hand presents in general the undulated aspect, perceptible in subjects who have suffered for some time of paralysis agitans The left hand has suffered the same atrophies as the other, the thumb has its phalangine retracted, while the other fingers are turned toward the back of the hand in their first phalanges, and doubled, claw-like, in the others, looking like a tiger's paw

In the inferior extremities there are callous patches in the anterior extremity of the metatarsians, where there exist also some pink spots, as well as in the trunk Points of anesthesia are not observed, except in the superior limbs, especially where the skin is a little callous, as is the case in the inferior extremity of the metacarpians, the left hand is almost useless, as it can not hold small objects, and, in general its touch is imperfect[1]

"M V, 22 years old, was grinding chocolate, got wet, and from that moment felt his hands benumbed, and pains with swelling in the feet He has on his body neither spots or tubercles and his brows are intact He has now four fingers of the right hand twisted and partly atrophied, in the left, the lesions are similar, but less pronounced, he feels much dryness in the hands and slight ulcerations are visible on the fingers On the right foot he presents toes—the first and the last—much retracted, while the others are raised, the skin in that region is thick, in the left these lesions are less pronounced but it shows cicatrices of old lesions Sensibility is very obtuse in the feet" (Garcés)

7 We come now to the essential point of leprous diagnosis Is it a parasitic disease? All the micrographers answer affirmatively, but it must be observed that in various cases of anesthetic leprosy the

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[1] This man has been ill for twenty two years and offers no other symptoms, but those mentioned in this observation

leprogenous microorganism has not been discovered (Cornil and Babés) I do not know whether in Colombia the microphyte has been found in our patients, and in spite of that, I doubt no wise of its existence I believe that in most lepers the bacillus of Armauer Hansen exists, but I am very far from thinking that the same is the initial phenomenon, the agent *sine qua non* of leprosy What, then, opens the play? In my opinion the same thing happens with leprosy as with pulmonia, typhoid and other microbian diseases We live in close contact with them, we take them in our aliments and drinks, we carry them in our clothes, and we respire them continually, and in spite of all that, they do us no harm, unless some external cause puts us into a condition to be influenced by them In pulmonia and typhoid fever there is a perfect relation of cause and effect which is very well explained by Friedlander's and Eberth's microbes, but it is not the case in leprosy

The initial phenomena is a vasomotor paralysis, a shock to the peripheric nervous system, which prepares it for receiving the microphyte encountered in leprosy, but which alone does not constitute the disease The latter may exist, in the anesthetic form without microbes, and perhaps likewise in the initial stages of the other forms, in all, the nervous lesion and the local circulatory disturbance precede, and when these exist the microbe establishes itself, as a swarm of bees alights in the hollow tree which can contain them The microbe once admitted, helps to foster the disease, the nervous lesions continue being produced, new colonies appear and help the leprosy forward

"We are induced to make this observation by the following consideration the leprous microbe is of difficult cultivation, but once cultivated it develops with a rapidity which is in strong contrast with the slowness with which it works in animal economy On the other hand, the microbe must die in a short time, whenever its development is rapid Nevertheless, Cornil and Babés affirm that after having been separated ten years, a fragment of leprous skin was found to contain living bacilli, which is contradictory to their rapid development, unless we admit that, after desiccation, the parasite can remain asleep like the bed-bug and exists in a latent state for an indefinite time, but such is not the case in the organism, and that is all we have to consider

"Why does the organism invaded by myriads of microphytes wait so long before it announces their presence? In our opinion, because the soil is not equally well prepared, the affection begins in the territory of certain nerves, it propagates itself, and as long as the nerve is not diseased the bacillus does not establish itself in it, so it goes on spreading, until it reaches a number which can not be contained in the tract of the nerves and in the affected regions, the circulation then takes it up, transports it into all the organs, and the disease from local becomes general Thus we see that lepers who had lived many years without suffering great pains, nor lesions of rapid progress, suddenly, unexpectedly, present alarming symptoms, which, in a few days carry them to the grave

"In short, leprosy is a microbian disease, but whose primordial symptoms and lesions are localized in the nervous system and independent of the microbe *sometimes through life* It is possible to carry the bacillus of Hansen, without being a leper, and *vice versa*, there are lepers without bacilli " (Cornil and Babés)

8 "The microphyte," says again Dr Garcés, "has a very long existence and a power of resistance which protects him against the ordinary climacteric influences Spread in such profusion, it must, no doubt, surround us everywhere, and if it has not as yet been discovered in the atmosphere, it is because it has not been sought there, and because it is not known well enough In a land of leprosy we carry all about us the germs of the disease, and all we have to do, is to beware from making ourselves an appropriate soil for it The contagion can be made by the intermediary of the tainted objects carried by the lepers, but without aptitude for contracting the disease, there is no contagion The leper will infect us, if we are prepared for that, as the air would do, or any other object conducting the microbe, but without lesions of the peripheric nervous system and of circulation or to speak more clearly, without an entrance door, the disease is impossible Leprosy, therefore, is a disease which can be caught by contagion, or by contact with lepers, or without it, it is enough to be apt to receive the microbe, which may be caught wherever it is found, and even be carried on the body for a long time

"An instance is the case quoted by Barber, of a person operated on for a small sarcoma of the face, in which the microbe was discovered, who, in consequence of this operation, became a leper

9 "Contagion is not common and general, as in smallpox, scarlatina, measles, etc , because these diseases need no initial local lesions, the whole organism is their theater and they find it prepared, for this reason the individuals who escape them are rare *In leprosy the local lesion is indispensable, and as it is only rarely produced in the required condition, contagion is rare* " (Garcés) (Italics my own)

10 "Heredity of leprosy can not be admitted, unless the disease is admitted as a nervous disturbance, as a microbial disease it has no existence " (Garcés)

11 Prophylaxis avoidance of intercourse with lepers, especially those who have reached an advanced stage of the disease, and more than everything else to avoid living in closed places where lepers have resided, and using furniture or other objects which have belonged to them A guitar, a leprous dwelling have sufficed once to infect almost a whole family Insects may transmit the disease. bugs, flies, pulex penetrans, baths, beds, etc

"A young lady of the Department of Santander, traveling with her parents, slept one night at an inn in the same bed in which some nights before a leper had slept The bed-bugs pricked the young lady that night, and all the prickings were converted in a short time into lepromas and leprous ulcers The young lady was seriously ill and died in less than a year with all the symptoms of leprosy perfectly characterized " (Garces)

Disinfectants do little harm to Hansen's bacillus, but microbicides like camphor, corrosive sublimate, etc , may be used with advantage to wash contaminated clothing and hands

12 "In places where leprosy is at home it is necessary to avoid the quick changes of temperature which might stop perspiration, such are, baths in very cold water, being tired, draughts of cold air when coming from a hot room, or when just awakened, or coming

from a dance, or from the neighborhood of a baker's oven or from the ironing board Don't live in damp places, especially during confinement or any other illness, for experience teaches that after a confinement women predisposed to the disease, acquire it easily, and the same is observed in convalescence from grave diseases, as typhoid, dysentery, etc We have instances of all these circumstances It is of the highest importance not to change when you come tired or perspiring from the street, and you must not even enter the rooms before you have arrived at an appropriate temperature, it is better to wait in the hallway ' (Garces)

13 " Sudden changes of climate in a person already affected by the disease, only precipitate its development, and for that reason travels to *terra caliente*, which are often undertaken by lepers, benefit a few months, that is, as long as they are in the hot country, and exacerbate the disease when the patients return to a temperate and damp climate, like that of Popayan ' (Garces)

14 ' Whatever may be alleged on the other side, sequestration of the lepers is a necessity—for two reasons the first is that the leper himself flees from a society which hurts his feelings by its loathing and horror, and the second, is the duty of every civilized government, to guard the interests of the community, of which the most important is health All civilized nations have been alive to this Leprosy is contagious, contagion is effected by microbes which the *leper throws* off in his dejections, discharges through his skin, and scatters everywhere, wherever he lives This fact is sufficiently proved, and requires rigorous measures ' (Cornil and Babés)

But sequestration must not be used by half, to isolate a leper in his own house, in the midst of his family, is only to gild the pill to hide its blackness, without diminishing its effect, and makes us suppose one of these two things either the nature of the disease and the last observations on it are unknown, or that an official sanction is necessary in order that the sick people continue to live isolated in their houses, as heretofore, and are thus allowed to maintain among the population, centers of infection On the other hand, to condemn an individual to live cooped up in a room, breathing bad smells and an atmosphere vitiated and infected by those same germs which he discharges from his body, which continually penetrate anew into his organism, and aggravate his condition by auto-infection, to deprive him of exercise and free air is a thousand times worse than to sentence him to the galleys, or to the obscure dungeons of Carthagena

The isolation must be social, not individual, effective and not fictitious, for pity's, duty's, policy's and hygiene's sake, the lepers must be removed from the towns, but provided with all the accommodations required by their condition They must be considered as sick persons, not as proscribed individuals They ought to be established in colonies, with hospitals and all the means of living, they must *not* be disseminated but concentrated in localities where they can work and live in society, without being wounded by the talk of the vulgar, by the repugnance and loathing of friends and acquaintances, *in one word*, it is necessary to create for them a medium in which they will not be continually provoked to curse their fate, and where their lot will not be made more bitter than it is by itself It is not at all inhuman to thus isolate them, it is to give them the greatest boon which they can enjoy, it is to give them liberty, of which they are deprived in our society surrounded by suspicious eyes, victims of cruel speeches, in which the wretches are represented as monstrous beings, engaged in actively communicating to their healthy brothers the horrible plague with which they are stricken, and as guilty of actions so atrocious that the pen refuses to write them down " (Garcés)

15 The following may give the reader an idea of the way in which this terrible disease affects the feeling of the general public " Hygiene also commends this measure (isolation), 1, to protect society against a danger which, however far off it may seem, is too terrible to be disregarded, jeopardizes many interests, and is a permanent menace to the people, and 2, because the leper needs air, exercise, liberty, work, tranquillity to lift up his spirit, and removal from all that reminds him of better times and shows him too glaringly his horrible situation The choice of the site and the regulations for the colony must be carefully considered, so that neither the lepers nor the public have cause for complaint Each department must have its leper colony well provided with all the necessaries and perfectly regulated

" The lepers, far from being afraid to leave society will under these circumstances desire to do so, and although their disease will remain, they will have a more tolerable existence than that which they have now, and we shall in this manner stop and cut by the root, a plague which threatens our children and which would put hundreds of families into mourning Yes, there should be no hesitation When you least think of it, leprosy may knock at your door, and with or without your consent, cross your threshold A young, bright lady, 14 or 15 years old, the flower of the family, the mirror in which the father and brothers see themselves, the joy of the whole world, an image of candor and innocence, coming back from a visit, changes imprudently her attire, catches cold, to use the common expression She soon is covered with wheals, feels her limbs grow heavy, her ears itch and soon begin to swell, reddish or speckled spots invade her lovely face And now old women's medicine galore, physicians also are consulted, the recommended climates are visited, and, in spite of all that, the spectre pursues her course, he grasps his victim with both arms, consternation spreads in the family, society avoids the victim, slander prepares its arrows, and a hell of horror and suffering succeeds to the gaiety and to the fond illusions of past times And that is not all, the charming young lady who is the sister of the victim, her interesting brother, are looked at askance, the families shut their doors upon them, nobody will have any relations with a house in which there is a leper, the servants flee, business is paralyzed, sadness and despair reign absolute until comes the moment of separation, if isolation is imposed To depart! and to depart forever! To become an outcast! To drag out a life of privations, wounded to the very depth of the soul, having no consolation but God, no hope but eternity, exhausted by physical sufferings and tortured by the remembrance of those who were her own, and to whom she leaves a stigma of malediction It is horrible! It is heartrending! Can such a thing happen in a civilized land, in a Christian society? Can we remain impassive before such a spectacle? And how can we throw such an anathema on the future generations? Let us cut the evil without hesitation, for we can cut it

"The lepers who now exist are all Catholics, capable of bearing pain, full of resignation, sufficiently courageous, and virtuous to immolate themselves for their brethren, and suffer alone, the horrors of such a life as has fallen to their miserable lot All of them will be ready to leave their domestic hearths, when they think of the interests of future generations, and of their own families" (Garcés)

16 Dr Garcés recommends the extraction of the tuberculous lepromæ or galvano-cauterization

CONCLUSIONS

The most important point which I find in Dr Garcés article is the fact vouched for by him that leprosy not only very often is not accompanied by bacilli, in its first stage, but that the disease may run its whole course without *any microphytic influence* or presence Here again the autochthony of leprosy is raising its head It seems quite rational to admit that in certain moist climates a condition of nerves is produced, a polyneuritis which results in dystrophia of the peripheral tissues This would be a quite intelligible origination of the disease The occurrence of urticarial wheals would imply peripheric nervous disturbance as the very first symptom of leprosy, whether the disturbance be the result of cold, or of some infectious action on the skin, either sound or broken

The appearance of the bacillus by inoculation directly or through a host, marks a second definite period of the disease In lupus we have the same trophic loss of tissues as in leprosy, and the bacilli of the two diseases are not distinguishable except by this circumstance, that the leper bacillus is gregarious, while the other is more individual The microbes presenting themselves so differently may differ in a similar way in their action, this would explain the resemblance which exists certainly between these two diseases, and also the difference I should think that leprosy and lupus are the same disease with a difference

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FIRE-PROOF ASBESTOS SURGICAL DRESSING

Read before McKean County Medical Society, Pennsylvania, Oct 1, 1895

BY EVAN O'NEILL KANE, M D
KANE, PA

I desire to present for your inspection a number of asbestos materials such as are commonly used in the arts, and to show you how admirably fitted they are to serve as surgical dressings Their softness to the touch and glistening silkiness of appearance commend them as being unirritating to the skin and soft and cleanly as a covering I hold that on account of their indestructibility when subjected to high temperature they are the only materials which, as dressings, can be rendered absolutely aseptic, while at the same time the variety of forms in which they can be manufactured enables them to fill all the requirements for which cotton fabrics are used in surgery, and with more satisfactory results

Appreciating the difficulty one is under in preparing dressings that shall be positively aseptic, and of retaining them so for any length of time, it had always been my custom to have them all thoroughly impregnated with bichlorid of mercury, iodoform, or boracic acid as shortly as possible before using them This procedure entailed much loss of valuable time and when operating in accident cases at a distance from my hospital I was always in dread, lest, during transportation to the scene of action or after being spread out among the flies and dirt upon the table of the farmhouse, or lumber shanty, or upon the cushion of a cabin car, a new horde of germs find entrance to them I am, therefore, satisfied that my present method of only using fire-proof dressings, beside saving much valuable time is the only safe one to pursue, and the results which I have obtained since making use of them have more than justified me, I am sure, in so believing

Asbestos dressings of all kinds can be kept as carelessly as if they were germ proof They may be carried in any parcel, paper bag or hand satchel, may be handled by dirty hands, may be spattered with blood, matter, the ejecta from the stomach, or any sort of filth, might be literally crawling with all the worst forms of germ life and yet can be rendered absolutely pure in less than two minutes by tossing them upon the coals or into the blaze of an ordinary kitchen stove or fireplace

My custom is now to carry with me in my buggy case a compact parcel (asbestos materials are very compressible) containing a sufficient supply of dressings of every sort, necessary to meet the requirements of general operative surgery When preparing for an operation, I lay out upon a table, board or chair, the amount and sort of asbestos material which I expect to use When the operation is completed and I am ready to apply the dressings, I instruct my assistant to place them upon the coals or in the flames of the nearest stove or fire and allow them to remain there a few moments, usually until they begin to assume a cherry red and then remove them with a tongs, fork or whatever else is convenient and spread them out beside me on a clean napkin or piece of paper Then I dust them with iodoform, aristol or other antiseptic powder, should such be desired, and, as they cool rapidly, proceed at once to apply them to the wound

When working in my operating room I have a specially constructed receptacle made of wire netting, not unlike a griddle, in which to retain the dressings while subjecting them to heat I find this unnecessary and cumbrous, however, to carry with me about the country, observing that an ordinary tongs or toasting fork answers the purpose

Asbestos goods are now manufactured in such a variety of forms that even from a country hardware store the surgeon can supply himself with the materials necessary to dress every kind of wound or injury

The form of asbestos most largely used by me as a dressing, because most nearly like absorbent cotton of any of the preparations made from asbestos, is asbestos fiber It is the same substance which is used to make luster in the back of fireplaces This material is as soft as floss silk or eiderdown, and its absorbent properties are much greater than those of absorbent cotton, an advantage which, aside from any other, recommends its use The only objection I have yet found to it is that its fiber is not as long as that of cotton, yet after all in many respects this is an advantage When thoroughly saturated with fluid, the surface of a mass of this material becomes as slippery as soap, a condition which I can not explain, as it is insoluble, but this certainly enhances its value as an application to sensitive surfaces, such for instance, as the inside of the orbit after the removal of an eye, or to the anus after an operation for hemorrhoids It is certainly the very best substance to apply as a first dressing after laparotomies, or as a covering to the stump after amputations

Next among the asbestos materials in usefulness will be found asbestos paper, or felt, as the manufacturers call it, which can be purchased by the yard for little more than ordinary wrapping paper It is manufactured in various thicknesses, from that of newspaper up to that of the heaviest binder's board Its quality also varies greatly, the texture of some being much smoother than that of others This paper may be made use of for bandages by cutting it in long strips of the desired width and length, for light wrapping paper it is sold by the pound in rolls of any length desired Such bandages are not strong enough to stand a great strain, as muscular contraction or the retention of a heavy weight, but will answer all ordinary purposes as a means of retaining dressings in position They are well adapted for holding inner dressings in place and wherever an aseptic bandage is necessary Being in fiber not unlike strong parchment paper, these bandages are more easily removed by the scissors than are those made by cotton cloth It is also useful in most instances where absorbent lint or gauze generally find their place It will prove valuable as an application or covering to raw surfaces such as those of open granulating wounds Its texture and tendency to become slippery render it unirritating, while its absorbent properties, which are equal to those of the best blotting paper, enable it to take up and carry away discharges and exudations which under rubber tissue, lister protective, wax paper or waterproof material would be retained For dressing wounds, I generally lay it directly upon the raw surface without previously dusting it with any antiseptic powder, in order to retain its full value as a non-irritant, it being already aseptic, and if there is much exudation I cover it with a layer of asbestos fiber which I dust thoroughly with iodoform or boracic acid By this means the discharge from the surface beneath being rapidly absorbed through the paper which has no irritating antiseptic in it, is completely taken up, carried away and disposed of by the overlying layer of fiber which, containing as it does an antiseptic among its meshes, prevents decomposition taking place

Asbestos wicking, packing and cord which are sold by the pound in rolls or balls are all admirably adapted for drainage tubes or wicks They are soft, pliable and smooth, slippery when thoroughly wet, and very absorbent I use them largely as a packing for abscess cavities and have found them answer admirably as a wick packing in the excavations left after the removal of dead bone, as within the shaft of the tibia, etc In such an event they should be thoroughly impregnated with iodoform or boracic acid and fed into the cavity with a dressing forceps, in the same manner as in tamponing with absorbent gauze They will be found to fill more closely every interstice and with much greater ease of application than the latter They are also more absorbent

As an aseptic sponge or swab, I have not given asbestos a thorough trial as yet The fiber, however, takes up moisture so readily and is so smooth and slippery when wet that I believe, were it made in little bunches covered with asbestos cloth, in the same manner that we now make cotton or wood wool swabs, it would be found most serviceable as a sponge, one which could be relied upon and absolutely free from septic material

Asbestos cloth, as at present manufactured, is too coarse for surgical uses I see no reason, however, why it can not be made sufficiently fine to answer all purposes for which cotton cloth is now utilized It would be found softer, more absorbent, and less likely to adhere to raw surfaces

My method of application of asbestos dressings does not differ materially from that resorted to in applying those ordinarily used, except that on account of their greater absorbent properties, they can be retained in position for a longer time without fear of sepsis or the collection of discharges about the surface of the wound

I will not enter into the details of my *modus operandi* in the application of these dressings, making use of them as I do, precisely in the same manner as of other materials for the same purpose

It is not my wish to urge the superiority of asbestos dressings either on account of their soft, unirritating texture or for their remarkable absorbative power, but simply because, as I have already pointed out, they are more readily, more rapidly and more certainly rendered aseptic than any other dressing materials

I have recently made use of asbestos materials largely, both in my hospital and outdoor practice having applied them to a great variety of wounds among which were laparotomies and various other capital operations In all cases the dressings were first subjected to great heat, usually until their edges became incandescent, before they were applied Frequently, it was not considered necessary to impregnate them with antiseptic powder, but in all cases the results proved equally gratifying Much time and annoyance in preparation heretofore necessary has been saved, a hot fire being always within reach When attending patients in the country I have, a number of times, re-dressed with the same dressing when by some neglect new material had not been brought with me for the purpose It only became necessary to wash them thoroughly to rid them of the more tenacious of the discharges and to then subject them to a cherry red heat to restore them to purity Repeated heating, however, seems to injure the pliability of the fiber, rendering it friable Still to the country surgeon, there is an advantage sometimes in being able to use the same dressing more than once, even if it is not as silky after its second heating

It must be admitted that asbestos materials, roughl manufactured as they now are, chiefly for the use o builders and mechanics, do not look as attractive a our snow-white surgical cotton, absorbent lint an the like Yet if Keen, Morton, Parke and othe leading surgeons were to become convinced of thei superiority, the makers of surgical supplies woul soon manufacture a line of them which would every respect be superior to the ordinary cotto dressings now in use

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Sterilization of Catheters —A new apparatus has recent been demonstrated, depending upon the action of the vap of formalin Sterilization is complete the instrumen remain aseptic so long as they are kept in the apparatu gum, silk and metal catheters and a cystoscope were treated and remained uninjured by the process during eig months, and no irritation of the mucous membrane of t urethra resulted —*Therapeutische Wochenschrift*, Oct 6, 18

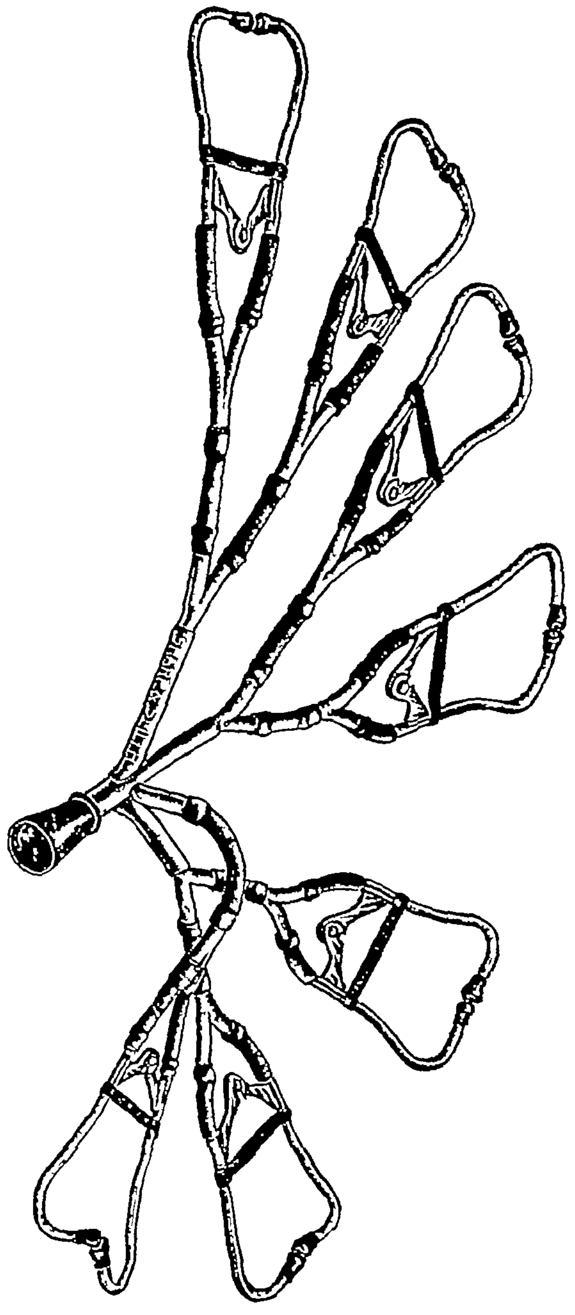
NEW INSTRUMENTS

A MULTIPLEX STETHOSCOPE

BY A M CORWIN, M D,

CHICAGO

In the February number of the JOURNAL I described a double stethoscope which I have employed during the past three years for class demonstration of physical diagnosis in Rush College In a later number of the JOURNAL, Dr H A Hare, of Philadelphia, described a multiplex stethoscope upon the same principle, but using tubes long enough to allow some sixteen individuals to listen at once



The double stethoscope makes possible the accurate demonstration of sounds which both instructor and student hear together—a multiplex stethoscope, if properly constructed, not only has this in view, but more, in the saving of time I have devised a multiplex stethoscope as represented in the accompanying cut, kindly furnished by Sharp & Smith, of this city I first experimented with long tubes A semicircle of twelve chairs, placed side by side, will bring a patient at a radial distance of about five feet, while the ordinary sounds of the heart and of normal bronchial breathing can be fairly well heard through this length of tubing, the less distinct sounds, as those of vesicular breathing and most of the adventitious sounds, râles, etc , are but poorly transmitted

After trying several shorter lengths and lessening the number of listeners, I have found that two feet is about the limit Tubes of greater length than this do not satisfactorily carry many of the sounds perfectly accessible to the ordinary stethoscope, and are therefore not applicable in the construction of a practical instrument for the class-room

The instrument here represented will accommodate six students seated in a semicircle close about the patient, who, if occupying a revolving seat, may be rotated as desired to make all parts of the chest conveniently accessible The demonstrator stands behind the patient and by a seventh stethoscope, connected at right angles to the main chest piece, is enabled to listen with the others and to manipulate both instrument and subject When the ear pieces are all in place there need be no handling of the apparatus by the students Necessary questions are readily heard and answered without the removal of ear pieces, so that there is no more difficulty in avoiding extraneous friction sounds than in the use of a single stethoscope

As to the size of the tubes used, all stethoscopes should be constructed so that the internal caliber of ear pieces and main arms of the instrument is about that of the external auditory canal, as exemplified in the ordinary Knight's stethoscope, after which the metallic arms of my instrument are patterned

In my experience, no better results can be obtained by a larger caliber than this If the caliber is smaller, there is to my ear a decided decrease in the distinctness with which sounds may be heard

Short pieces of stiff rubber tubing are used in connecting the metallic parts of the multiplex instrument The distance from the extremity of the chest piece to each ear piece is about 22 inches Further than this the relations of the parts is too obvious to need description

SOCIETY PROCEEDINGS

Tri-State Medical Society of Alabama, Georgia and Tennessee

Seventh Annual Meeting held in Chattanooga, Tenn

(Continued from page 960)

DR WILLIS F WESTMORELAND read a paper on

REPORT OF CASES, *a* TRACHEOTOMY FOR FOREIGN BODIES, *b*, CYSTOTOMY FOR STONE

He reported twenty seven successful operations for foreign bodies In all the first ring of the trachea was cut and the opening enlarged down as necessary Operated as early as possible The external incision was made large Muscles were separated, the fascia divided, vessels were ligated, so that no forceps were in the road If necessary the isthmus of the thyroid was divided and ligated No tenaculum was used in the trachea Instead of trachea forceps, the opening was held open with silk introduced with a needle having no cutting edge The foreign body was not probed for, but if necessary the wound was left open, in one case (cockle bur) for three days The mucus will sometimes prevent closure of the wound In closing the latter, the tissue under the mucous membrane is brought together with silk, using a needle having no cutting edge and the Halsted or mattress suture Thus the layers were all brought together In cystotomy for stone, he avoids rectal dilatation Hydrostatic pressure is used to distend the bladder, raising the water two feet This causes the bladder to bulge through the opening No tenaculum is used to steady the bladder, but it is held with two artery forceps, between which the incision is made as high as possible After removing the stone and flushing the bladder, the opening is closed with the Halsted suture and the closure tested by raising the water (an instant) three feet

Dr G A Baxter indorsed the position of the writer, but was attached to the medio lateral operation Stone is rare in this section, there not having been a dozen operations in fifteen years The trouble is more frequent in Middle Tennessee

Dr J A Goggans related a case in which the larynx was almost occluded at the site of the thyroid cartilage by a new growth so that he had to operate rapidly to save the patient Throwing the head back increased the difficulty of breathing, and the head had to be held forward and the larynx steadied with the tenaculum He said that suprapubic cystotomy was the operation *par excellence* for stone He was prejudiced against the low operations, as he was once called on to sew up a large fistulous opening between the bladder and the rectum in a case sent him He had attempted to sew up the opening by silkworm gut, operating through the rectum At the third operation he had divided the sphincter ani muscle and almost closed the fistula

Dr W E B Davis said that he was glad that both operations were fairly considered The results of the older surgeons were good They performed the low operation He found that statistics of the suprapubic operation were bad, because bad cases were selected for the operation A distinguished surgeon had so operated in a bad case to save his statistics for the low operation This shows how statistics can be doctored He thought it well to leave the wound open for drainage, for there is always disease of the bladder and we may have a new stone in a few weeks

Dr R J Triple said that his experience was limited to a few cases operated on for disease and advocated leaving the wound open for drainage As a guide he used a sound Did not fill the bladder with water, but washed it out before the operation In tracheotomy, he uses long scissors forceps and does not stop to ligate the vessels These held the wound open and saved an assistant

Dr Westmoreland, in closing the discussion, said that time was an important item, but that we had two minutes after the child quit breathing, for he could be resuscitated after that time He advocated cutting high in suprapubic cystotomy as the bladder was near the surface, being quite deep at the pubis The tenaculum was avoided, as the urine might be voided through the small opening The buried silver wire was used owing to the fact that it took several weeks for muscular tissue to unite and no other suture would last that long According to Gregg-Smith, without this suture 20 per cent of cases of laparotomy had hernia

It would make no difference if the peritoneum were cut in the high operation In these cases the wound was not left open, as they were not cases of disease

Dr J A Goggans, of Alexander City, Ala, read a paper entitled "Early Diagnosis and Vaginal Hysterectomy in Cancer of the Uterus" dwelling on the importance of prophylaxis, early diagnosis and early operative treatment by vaginal hysterectomy

Dr A R Robinson of New York, read a paper on

THE TREATMENT OF MALIGNANT CUTANEOUS EPITHELIOMATA

In cases where the diagnosis is not positive, iodids and mercury should be used The elements extend much further than is generally supposed, when they are excised, pathologic cells are left and we have so-called recurrence which is really a reappearance when the wound has been treated antiseptically Suppuration should be encouraged, as the toxin of the pus is more destructive to the epithelioma cells than the erysipelas toxin He opposed cutting and advocated the use of caustics The toxins had cured no cases though some may have been benefited The caustic should destroy the tissue quickly and thoroughly Mild caustics, as nitrate of silver, should not be used Caustic potash liquefies the tissue as much as would be removed with the knife, beyond this there is an inflammatory exudate which destroys the pathologic elements The cancer cells may extend deeper than could be reached with the knife, here the potash is preferable There is less deformity than with the knife, more than with arsenious acid Chlorid of zinc acts more slowly, suitable only in certain locations as near the eye, also in the papillary form previous to the use of arsenious acid Pain may be avoided by mixing it in a 20 per cent solution of cocain Arsenious acid has a more elective action on the cancer cells and should, as a rule, be used weaker than in Marsden's paste (2 parts to 1 of gum arabic) It may be used 2 to 1 or 1 to 1 This will not attack normal tissue in twenty four hours It should then be removed, and if there is not sufficient necrosis, applied immediately for sixteen to eighteen hours Cases should be watched for a year or two, as there may be a reappearance Arsenious acid may be applied to the lips if care is taken to prevent getting it into the mouth, but on the nose it is especially valuable on account of deformity

These papers were discussed together

Dr R R Kime said that it was unfortunate that cancer of the uterus is not diagnosed early Often the symptoms are not well defined and are very insidious, not being detected sometimes until the disease is so far advanced as to preclude operative measures It was not possible to get women to submit to repeated examinations as recommended by some gynecologists Every physician should insist on proper examination of all women near the menopause that present symptoms or indications of cancerous disease

Dr W E B Davis thought that these cases were overlooked as they were so insidious in their development Every case of diseased cervix should be treated and cured He advised removal of the uterus and appendages for cancer

Dr P L Brouillite asked as to the danger of systemic effects from arsenious acid

Dr Goggans said that wherever there was cancer there had been irritation, hence the necessity of removing every source of irritation and every pathologic condition as prophylactic

Dr Robinson had applied arsenious acid on a surface as large as the hand and had seen no systemic effect Marsden advised not over an inch square If seen early, caustics are all that is necessary in cancer of the skin

Dr I P Stewart, of Attala, Ala, read a paper on

HEMORRHOIDS,

in which he dwelt on the necessity of an examination under chloroform if necessary Where tumors are small, he used a solution of red gum as an injection into the rectum, if larger, they are destroyed with the clamp and cautery

Dr E P Johnson had treated cases successfully with injections of carbolic acid 2 parts to 1 of olive oil to which was added one-fourth grain of morphin to each injection

Dr I B Cowan alluded to the new operation of excising all the hemorrhoidal tissue These cases often fall into the hands of quacks who inject carbolic acid and give temporary relief He likes the old method of tying the tumors In a bad case, where there was no distinct tumor, he caught the tissue with a tenaculum and thus tied it, putting in fourteen ligatures The result was perfect

Dr R R Kime said that many hemorrhoids can be dissected out entire, and the wound closed by over-and over catgut stitch with excellent results, leaving no raw surface to granulate Where blood supply is marked, will require ligature at base Has devised a speculum by which rectum can be ballooned in knee chest position in the same manner as the vagina in gynecologic work

Dr G A Baxter insisted on varying the treatment in different cases Carbolic acid he considered dangerous. Could not examine without paralyzing sphincter Was always able to find a distinct tumor

Dr R P Johnson said that the tumors are destroyed if the solution is strong enough and they are completely filled

Dr R R Kime read a paper on "Synthetic Perineotomy in Lacerations of the Perineum," using the term to designate a method of dividing and dissecting without loss of tissue The redundancy is due to hyperplasia, a subinvolution, which will disappear when the cause of the laceration is removed The method was described in detail and cases cited

Dr W E B Davis said there was more in the man being familiar with the method he adopted than the operation It was important to differentiate between perineal tears and those of the posterior vaginal wall

Dr W E B Davis, of Birmingham read a paper on "Bile in the Peritoneal Cavity and How to Deal with It" He presented an experimental and clinical study of the subject The experiments confirmed the position taken before the American Medical Association in 1892 The constant extravasation produced peritonitis unless there was satisfactory drainage A considerable quantity would be walled off, just as would any other irritating fluid It was noted that where gauze was packed around the openings in the gall bladder or ducts, the animal recovered as a rule The field of operation was walled off completely and there was no evidence of general peritonitis Numbers were reopened in twenty-four to forty eight hours and this condition found He took the position that in obstruction of the common duct by stone, an incision should be made, the obstruction removed and drainage established without an attempt being made to close the opening, as these cases will not stand long operation

Dr E J Trippe, of Chattanooga, reported several cases of "Appendicitis," illustrating the necessity of early operation and the fact that some die, no matter when operated on, and the technique

These two papers were discussed together

Dr R R Kimp said that many cases would get well without operation, but it is very difficult to tell which By use of salines and disinfectants many can be relieved by unloading the colon, relieving the hyperemia and establishing drainage If a case is progressing nicely for some days and gets worse suddenly and seriously, then operate without delay Would advise against an attempt to remove the appendix when an abscess cavity was opened, which is walled off from the general peritoneal cavity

Dr C Holtzclaw had had fifteen cases of appendicitis but had never been called on to operate They recovered with an ice pack over the inflamed area Operation should be performed if there was any evidence of suppuration, elevation of temperature or collapse

Dr G A Baxter said that the danger was not in operating but in delay The question lies in a diagnosis between obstructive and catarrhal peritonitis When we have a distinct enlargement and induration we have obstruction

Dr R M Cunningham said that Dr Davis was departing from his usual teaching, as he had maintained that normal bile would not produce peritonitis In a large number of post-mortems the appendix was not found inflamed once in a hundred times Operation is indicated where there is pus, swelling and induration

Dr J P Stewart always cures his cases with salines He related a case of injury to the gall duct, followed by distension of the gall bladder He aspirated and got five pints of fluid and bile, the next day two pints, later one pint, the obstruction then gave way and the same fluid passed per rectum

Dr J B Murfree said that no operation should be made for appendicitis unless there was some indication, such as recurrence or gross local changes

Dr P D Sims did not recall a case of death from appendicitis which had not been operated on It might be required, but swelling and obstruction did not indicate an operation

Dr R H Hayes praised the high stand taken by Dr Davis in the surgery of the duct, and asked as to the preliminary and after-treatment In regard to appendicitis Telamon, of Paris, had published statistics giving 90 to 95 per cent of cures without operation An English author gave similar statistics, whether these are reliable or not he can not say Many claim that when one has an attack of appendicitis he has a constant source of danger in his belly A few years back this was the main indication for the operation, and in this view it seemed that the operation should be performed at any opportune time

Dr Davis thought the case of Dr Stewart not a case of distension of the bladder, but that a cyst had formed It was saved by the operation The after-treatment was the same as in other cases of abdominal surgery He thought catarrhal cases of appendicitis were common When there is obstruction, there is pain Each case should be treated *on its merits* Some need operation In general septic peritonitis the patient will die if operated on

Third Day

Dr J R Rathmell, of Chattanooga, read a paper entitled "Acromegaly—Report of a Case" He stated that Paul Marde first described the disease in 1886, his theory being that enlargement of the pituitary gland was the cause of the disease In the case reported, with the symptoms common to the disorder, there were two uncommon symptoms These were long continued abnormal rhythm of the Cheyne-Stokes variety, and the inability to retain food or drink on his stomach for three months before Both symptoms were accounted for by the enlarged pituitary body, which weighed 475 grains instead of 5 or 10 normally The author believes the disease to be one of trophic origin, producing changes in the bony system, especially of the feet, face and hands, that the enlargement of the pituitary body and the other ductless glands was the result, not the cause, of the disease

Dr W C Townes, of Chattanooga, read a paper on "Acromegaly," exhibiting specimens from Dr Rathmell's case, the enlarged pituitary gland and a part of the ileum with a diverticulum He reported a case now under treatment, a marked feature of which was that although 52 years old, there was no impairment of the sexual function He believed the disease to be due to the pressure on the brain produced by the enlarged pituitary body

Dr W G Bogart said that these cases were rare He had seen Dr Rathmell's case The enlarged tongue made articulation difficult, the labored breathing gave evidence of suffering The points of interest were the length of time required for the development of the disease, four years, and the question whether anything could be done if the diagnosis were made early

Dr E A Cobleigh asked if it were not possible that the condition was a persistent accentuation of a normal process and, if so, as to the cause He reported a case presenting some of the symptoms

Dr J Berrien Lindsley said that the paper was an evidence that the profession was advancing, and in this respect second to none A disorder was being discussed, the name of which had not yet got into the dictionaries

Dr J R Rathmell said that the first evidence of the disease was loss of strength and enlargement of the extremities He believed it a disease of the osseous system, especially of the feet, face and hands, but it affects the whole bony system, just as we have a pseudo-hypertrophic muscular paralysis The line of treatment was to build up the system, and use electricity He had got some comfort from the latter

Dr J B Cowan, of Tullahoma, Tenn, read a paper on "Water versus Atmosphere the Cause of Malignant Malarial Fever," and related observations where water from clear springs was evidently the cause of malarial fevers One case, where there were two springs connected under ground, the upper was healthful while those who used the lower had the disease A marsh between the two formed a nidus for the development of the miasm In almost every instance where well and spring water had been abandoned for cistern water, malarial fevers had disappeared In a village supplied by a well, all had the disease except one family who used other water So many similar instances had come under his notice that he invariably changed the water in his malarial cases If sterilized water were used malarial fever would be unknown

Dr E T Camp could not agree that malaria was in the water alone, some of the poison might be so absorbed But it was said that in the tropics one would get a chill by sleeping in the open air He believed the air was the principal medium

Dr C Holtzclaw differed from Dr Cowan, and related a case where there was no improvement on removing to a location where there had been no malaria for eight years

Dr W G Bogart said that water was one of the means of introducing the poison into the system, but not the only means In a certain neighborhood where different waters were used, all were affected, whether they were cleanly or not

Dr Y L Abernethy observed that when we have a wet summer we do not have much malarial fever The paper seemed conclusive that we get the disease from water, but why don't we have it every year and why don't we have it all the time? The old theory was that it was due to the heat, moisture and decomposition Bowling's theory was that it was due to water so confined as to prevent evaporation Now it is said to be due to a germ Whichever is correct, it is true that nineteen twentieths of the diseases of the West and South are due to malaria, so that we have to give quinin, iron, arsenic, mercury, etc

Dr Cowan said that the reason we did not have the disease every summer was because the heat did not develop the germ All cases of malignant malarial fever were due to drinking water In parts of the South, where malaria was formerly prevalent but now unknown, it was due to the use of cisterns In one case a party camped several years on a lake and had malaria every year, they escaped by taking their water with them, although sleeping in the open air as before

Dr J Berrien Lindsley presented a paper on "Prevention of Smallpox" He did not believe that one fourth of the people of Tennessee were vaccinated Doctors were not willing to acknowledge their inability to diagnose smallpox, hence mistakes occur In Little Rock the disease was under way six weeks before its nature was discovered A rule of sanitary boards is, in case of doubt to give the public the benefit of the doubt and isolate the case All suspicious cases should be sent to some public institution He related several cases where undiagnosed smallpox resulted in spreading the disease and causing death

Dr A Berlin said the microörganism of smallpox was not yet discovered and we were left to empiricism Jenner had done more for the race than Napoleon with all his wars In the Franco Prussian war more French soldiers died from smallpox than were killed in battle The disease was unknown in the German army, as the soldiers had been vaccinated

Dr Lindsley said *that the reason smallpox was dangerous* was because of the neglect of vaccination This fear did not exist when he was a young man starting in the profession The profession had not done its duty in the matter of insisting on vaccination

Dr E T Camp of Gadsden Ala, read a paper on "A Complicated Case of Obstetrics with Rupture of the Uterus' It was a transverse presentation The child was asphyxiated but resuscitated The placenta not being delivered in an hour, chloroform was administered and the hand introduced into the uterus when the rupture was discovered The placenta was adherent but torn away, morphin administered but *death took place in four hours* He thought rupture took place before the version and was spontaneous If the placenta could have been gotten away and contraction induced, the patient might have been saved

Dr Y D Abernathy thought it possible, if a laparotomy had been performed

Dr W G Bogart said that the three interesting points were 1, the time of the rupture, 2, the cause, 3, the absence of symptoms We would expect to have all the well-marked conditions of shock The strange thing was that that there was no pain, loss of blood or shock With the complications—mal position, adherent placenta and rupture of the uterus with bad surroundings, death was inevitable

Dr S P Stewart thought the patient died from hemorrhage, not from shock A post *mortem* would have been of interest

Dr D S Middleton thought the adherent placenta indicated a *diseased structure, and this caused the rupture* The administration of chloroform opened the months of the vessels and death was from hemorrhage

Dr C Holtzclaw said the only chance was to sew up the rent after doing a laparotomy

Dr J R Rathmell said that having a general adherent fibroid placenta, the only thing was to let it alone and re*move the entire uterus*

Dr. G A Baxter thought that an operation should have been performed quickly and the operator governed by circumstances after opening the abdomen

Dr R M Cunningham thought the Doctor did the best to conserve his own reputation The case would have died anyway To be in line with modern surgery, an operation should have been performed

Dr Camp said that there was nothing to indicate the condition until the discovery was made In a similar case he would not operate, as the adherent placenta would have produced death later

Dr R H Hayes Union Springs, Ala, read a paper on "The Nucleins and Their Relative Position in Sero Therapeutics" The nucleins are protoplastic or bioplastic, cell substance the bioplastic or primal unit of the organism, the cell life, vital and resistant force, a proteid granular, cell life substance in which all vital energy and cell life resistant force originated, and through which all animal nutrition *took place The nucleins* are proteid bodies residing in the tissue cells and the yeast of certain plants (animal and yeast nuclein) The former taken from the blood and lymphoid glands of the body, residing principally in the polynuclear blood corpuscles or leucocytes, the proliferation of which they have the power of *increasing* (leucocytosis) They are natural defenders, arresting and overwhelming all alien *or* disease *germs as they* enter the blood stream Vaughan and McClintock have developed them They are *gotten up in three forms*, nuclein solution from the yeast of certain plants, vegetable, nuclein solution from the tissues of the body, thymus, thyroid liver, spleen, etc., animal, from the tissue direct, protonuclein The principle difference between the antitoxins and toxins is that the toxins antidote or antagonize the poison or ptomaine formed by the presence of alien or disease germs, they belong to the class of albumin serums and they attack the germs direct as soon as *they reach the blood stream* The nucleins are more direct, if less powerful, and have the advantage of attacking through the leucocytes any or all germs entering into the system Reports are encouraging from eminent men The author reported an ulcer of sixteen years standing cured in four months Another case of ulcer of the ankle (both *non-tubercular) very greatly* relieved in same time He favors from limited experience, more general application of *the nucleins*

*Dr G W Drake indorsed the use of these agents on theo*retical grounds Intends to use them and await results

Dr C Holtzclaw cited the transfusion of blood as being the use of nucleins, salt water does as well The Valentine meat juice injected near an ulcer was found beneficial, but water does better *The* whole business was an advertising scheme These preparations should be under the control of the government

Dr R P Johnson, of Chattanooga, read a paper on "Treatment of Diphtheria," and gave his experience with established methods, indorsing especially the benzoate of soda He read a letter from Professor Klebs, who did not speak favorably of the antitoxin treatment, but asserted better results from anti diphtherin He described a method of steaming the patient with quicklime to loosen the membrane by covering him with a sheet

The following were read by title When Consumptives Should go to Colorado and Why? by I C Minor, The Diagnosis of Incipient Phthisis, by L P Barbour, Some Simple Procedures in Tedious Labor, by R M Harbin, Uric Acid as a Factor in Disease, by E van Goidtsnoven, Sympathetic Ophthalmia by Frank Trester Smith

The following officers were elected for the ensuing year

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Treasurer, Geo R West, Chattanooga

Secretary, Frank Trester Smith, Chattanooga

The next annual meeting will be held in Nashville, Oct 13, 14 and 15, 1896

BOOK NOTICES

A Manual of Syphilis and the Venereal Diseases—By James Nevins Hyde, A M, M D and Frank H Montgomery, M D Illustrated Philadelphia W B Saunders 1895 8vo, cl Price $2 50

This volume contains the "essentials' of the subject, and he who masters all that is so clearly expressed in this handbook will have little need for the more elaborate treatises We are very pleased to note the advanced views of the authors on constitutional infection *from* the *various* venereal diseases On this subject we quote from the introduction p 20

"The proposition once held can not longer be sustained that gonorrhea and soft chancre are purely local diseases as contrasted with syphilis, which is admitted to have systemic effects The generalized results of gonorrhea are in many instances too striking to admit even of question, and in *special cases* the perpetuation of the soft chancre for years, with the damage resulting to the rectum, vulva, abdominal wall and thighs, with the production of marked cachexia, often renders that affection one of even greater severity than the milder cases of syphilis"

This concedes about all that was claimed by the "unicists," except the comparatively unimportant *one of identity* That systemic poisoning could occur from the chancroidal ulcer, was a proposition bitterly fought by the "dualists," but in this case the long record of clinical experience has buried them out of sight The authors also assert that "the evidence of a remote antiquity for the venereal diseases in general, is very strong" The authors speak of the term "gonorrhea" as a misnomer, and very properly if we mean a specific urethritis, but the ancients used the term to describe the disease which we term spermatorrhea, and their use of it was entirely correct Paulus[1] says, "Gonorrhea is an involuntary discharge of semen, taking place frequently *without erection of* the privy member owing to weakness of the retentive faculty" This is the view held by all the ancient writers When we come to Fracastorius and the writers *of* the sixteenth century we find that the confusion in the nomenclature commenced in the dark period of literature The ancients were clear enough on the subject

Jahrbuch der Practischen Medicin—Herausgeben von Dr J Schwalbe Stuttgart Ferdinand Enke 1895

This annual of practical medicine has undergone since last year an unexpected change *Up to this year* it had, in com-

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[1] The seven books of Paulus Ægineta, London, 1844

Dr. [illegible] Kelly Library
U. M. S. Medical College
39581.

mon with similar works, continued to increase from year to year in size so that it threatened to gain pathologic dimensions The present editor, Dr J Schwalbe, so well known as the editor of the *Deutsche Medicinische Wochenschrift*, saw the necessity of instituting certain changes in the make-up of the *Jahrbuch*, in the interests of the practitioner for whom it is published So judiciously have these changes been carried out, that it is in its new form probably the best handbook of current medicine that is anywhere published for the use of the practitioner While it fails to crowd all that has appeared in the previous year—good, bad and indifferent—into one voluminous book, or even into several volumes, it is far from being a short and limited compilation of only the most important publications, condensed within the scope of a convenient little volume On the contrary, on 625 octavo pages we find such a thorough and critical review of last year's medical literature, that probably few, if any, really important publications have been overlooked Much has been gained by the omission of special chapters on Anatomy and Physiology, as not pertaining to the requirements of a book of this character, but, while there has been some limit to the endless variety of publications in the different specialties, referring to compromises not yet settled among the specialists, to new theories, preliminary communications, etc, nothing has been omitted of the methods of specialism that have been or are likely to become of value in aiding the diagnostic or therapeutic resources of the practitioner,

It would be going too far to give a detailed account of the contents of this book A glance at them and the editorial staff will show what can be expected Following are the headings of the principal chapters General Pathology Pathologic Anatomy, and Bacteriology, by Professor Ribbert (Zurich), Diseases of the Nervous System, by Professor Seeligmuller (Halle), Psychiatry, by Dr Lewald (Berlin), Diseases of the Respiratory Organs, and Diseases of the Circulatory Organs, by Dr J Schwalbe (Berlin), Diseases of the Digestive Organs, by Dr Rosenheim (Berlin), Diseases of the Urinary Organs, by Professor Fürbringen (Berlin), Infectious Diseases by Dr Freyhan (Berlin), Anomalies of Constitution, by Dr Freyhan (Berlin), Surgery, by Professor Kolaczek (Breslau), Obstetrics and Gynecology, by Dr Czempin (Berlin), Ophthalmology, by Professor Horstmann (Berlin), Otology, by Dr Koch (Braunschweig), Laryngology and Rhinology, by Dr Michael (Hamburg), Skin and Venereal Diseases, by Dr Joseph (Berlin), Diseases of Children, by Dr H Neumann (Berlin), Climatology and Balneology, by Dr Butz (Munich), Materia Medica and Toxicology, by Professor Harnack (Halle), Forensic Medicine, by Professor Strassmann (Berlin), Hygiene, by Dr Pfeiffer (Wiesbaden)

The book is exceptionally complete, and the abstracts are short, concise and to the point A valuable aid in finding any desired article is—in addition to two complete indices of subject matter and names—a system of marginal notes throughout, giving the title of every article as well as the author It is but fair to state that a rare impartiality has been shown in the reviewing as well as in the selection of articles, American authors being well represented The general practitioner as well as the specialist will find this work a most fruitful source of information

Supplement to the International Encyclopædia of Surgery—Edited by John Ashhurst, Jr, M D, LL D, Philadelphia One royal octavo volume of 1,136 pages, illustrated by numerous wood engravings and a chromo-lithographic plate Cloth, $7 50, leather, $8 50 To subscribers to the entire set, cloth, $6 00, leather, $7 00, and half morocco $8 00

This volume is intended to supply the readers of Ashhurst's International Encyclopædia of Surgery a statement of such additions and changes as have taken place since the revised edition of that work was issued, seven years ago, naturally, therefore, the book is rather a series of surgical essays than a connected system of surgery Although the conservatism of the distinguished author leads him in the preface to eschew any claim to include "thoretic novelties," yet this dictum has not prevented the various contributors to the volume from presenting very much that will be new to many

As might be expected, the great activity that has taken place in bacteriology and surgical pathology has caused the re-writing of many topics, and in certain directions, such as that of cerebral surgery So much has been added that the usefulness of the book will by no means be confined to those fortunate possessors of the entire work

All the topics treated of have been brought quite up to date, and we only refrain from giving a list of the numerous titles on account of lack of space Suffice it to say that there is no attempt at padding in this great book of over a thousand pages, but the topics are those of living interest to the surgeons of to day

It is printed in the same excellent style as the preceding volumes of the series, and copiously illustrated

An American Text-Book of Obstetrics for Practitioners and Students, by various authors Richard C Morris, M D, Editor, Robert L Dickinson, M D, Art Editor, with nearly 900 colored and half-tone illustrations Philadelphia W B Saunders 1895 Cl, pp 1009 Price $7 00 For sale by subscription only

This text-book is written by well-known teachers in some of our leading medical colleges, and is a credit to American medical literature The publisher has provided good paper, clear and beautiful print with artistic illustrations Indeed, it is only just to say that no work heretofore published in this country surpasses it in these respects Some of the illustrations are works of high art See for instance (Fig 194 p 357), plate 48, facing p 754, and the reproduction from Sappey (Fig 2 plate 9), facing p 66 We can not praise the book too strongly, for it sets forth the subject in an excellent typographic fashion, and the text represents the latest teaching of the obstetric art The names of authors are printed with the list of titles in the table of contents, an arrangement which enables us to attach the proper responsibility to each statement made As a whole, the work covers in a fairly complete manner the department of obstetrics

Elementary Technique in Histology and Bacteriology, by Ernest B Hoag, A B, B S, and H Kahn, Phar M 1894 E H Colegrove, Chicago 12mo, cl, pp 130 Price, $1 00

This guide in elementary technique is intended for the use of medical and other students beginning work in Histology or Bacteriology, and is therefore divided in two parts, one to the methods of preparation of tissues and of examination in the histological laboratory, and the second part to bacteriologic examinations It is full of information and will be found extremely useful for beginners in laboratory work The authors have made a very clear exposition of the subject

The Anatomy of the Human Head and Neck—Graphically illustrated by means of superimposed plates, with descriptive text by Dr Schmidt English edition by William S Furneaux New York Thomas Whittaker, pp 16 Boards

This is a pictorial illustration of the head and neck, with an addition showing the structures revealed in a median section of the eye on a larger scale than the model There is also a descriptive text accompanying the plates It is a handy book of reference

The Medical News Visiting List for 1896—Weekly (undated, for 30 patients), Monthly (undated, for 120 patients per month), Perpetual (undated, for 30 patients weekly per year), and perpetual (undated, for 60 patients weekly per year) The first three styles contain 32 pages of data and 160 pages of blanks The 60 patient Perpetual consists of 256 pages of blanks Each style in one wallet shaped book with pocket, pencil and rubber Seal grain leather, $1 25. Philadelphia Lea Brothers & Co 1895

This favorably-known Visiting List has been thoroughly revised and brought up to date It contains sections on Examination of Urine, Artificial Respiration Incompatibles, Poisons and Antidotes, Diagnostic Table of Eruptive Fevers, and the Ligation of Arteries

A Thumb letter Index is furnished to subscribers at 25 cents' additional cost

The Medical Record Visiting List and Physician's Diary for 1896—New Revised Edition with Calendar Tables of Doses, Tables of Equivalents, Directions for Emergencies, Antisepsis, Disinfection, Special Memoranda, Cash Account, etc, etc 30 and 60 patients per week—bound in black or red morocco leather with flap, $1 25 and $1 50 Circular on application William Wood Co Publishers, New York

This is one of the most useful of the many excellent visiting lists on the market Its appearance is neat and attractive, and it is not too bulky The paper is good and the arrangement convenient

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SATURDAY, DECEMBER 7, 1895

THE NEW YORK COUNTY MEDICAL SOCIETY AND THE HOSPITAL APPOINTMENTS

The ninetieth annual meeting of this large Society was held November 25 in the New York Academy of Medicine, and the following officers for 1896 were duly installed Dr Edward D Fisher, President, Dr Frederick Peterson, First Vice-President, Dr J Henry Fruitnight, Second Vice President, Dr Charles H Avery, Secretary, Dr William E Ballard, Assistant Secretary, and Dr John S Warren, Treasurer

The retiring President delivered his valedictory address, and referred to certain matters that agitate the the local profession to an unwonted degree He alluded to the coroner's office as an effete and ridiculous institution He emphasized the point that the monopoly of medical appointive positions in the county hospitals by the three large medical colleges of the city, through the favoritism of the Commissioners of Charities and Correction, was an affair that this Society should unite to oppose Dr Grandin is reported to have said "I will tell you, gentlemen, why you have been forced to submit to this outrage of arbitrary exclusion from service in public institutions—it is because you do not work together I have seen the gradual development in this city of a great monoply in medical circles which, if not checked, will make it difficult for general practitioners to earn their living" He dwelt upon certain features of dispensary abuse, the catering of certain of the hospitals to persons in comfortable circumstances to the neglect of the really necessitous classes, and incidentally to the consequent plundering of the profession

The Secretary stated that a committee of the Society had called upon the Mayor, who, however, had refused to see this committee on the plea of being too busy, as at the time, the Secretary said, he was engaged in marrying a couple Dr Brill then formally introduced certain condemnatory resolutions Dr Frederick K Sturgis, formerly a visiting physician at the City Hospital, who had felt the edge of the knife under the new plan of appointment, seconded the motion in a spirited speech, which was vigorously applauded "I am not here as a sorehead," he is reported to have said, "but as a citizen to protest against the control of medical appointments by a monopoly Forty years ago this same Society investigated a secret medical order whose purpose was to control all hospital and college appointments It would seem as though history had repeated itself, and that we were called upon again for the same work Your practice is dividing, and every year you will find it more difficult to resist the operation of the powerful medical syndicate '

Dr A W Warden spoke to the resolution in a conciliatory spirit, arguing that civil service was not the needed remedy for existing evils Dr Palmer Dudley also made an effort to stem the tide of feeling, but without avail The resolution was passed with great unanimity, and upon motion of Dr J Blake White the following committee was appointed to deliver a copy of the resolution to Mayor Strong Doctors B S J Roose, W R Prior and Robert A Murray

Following these proceedings the Society considered certain matters relative to membership A well-known member, Dr Cyrus Edson, resigned, and his resignation was accepted *No reasons for this step* were assigned, but a fact of some significance was found in the printing of an old and somewhat disused section from the Society's ethical charter, to the effect that it is beneath the dignity of the profession for any member to affix his name to any certificate, circular or advertisement of any nostrum, mineral water, or other proprietary article intended to be used as a medicine or remedy in disease, or to any patented instrument or appliance that is intended for medical or surgical use The resigning member is reported as saying that "the Society is hampered by too many old traditions I have indorsed certain remedies which are beneficial to mankind, while by the rules of the Society I must not recommend them" Another matter was the expulsion of Dr Edward C Mann, a specialist in nerve cases, on recommendation of the Committee on Ethics

It would appear that there has been sudden and unlooked for stimulation of the ethical conscience of a body that has for ten years, or more, been in affiliation with the "no code" State Medical Society We trust that the change of heart is deep, sincere and not based on any alleged approaching bankruptcy of the New York profession

The control of the hospitals by the medical colleges of New York is to be viewed solely as a commercial enterprise, whereby the colleges are supposed to gain certain clinical advantages over any they now possess. The quickening of ethical conscience in the Society, whereby professional honor is appealed to by many who have heretofore objected to any ethical rules shows clearly enough the absolute necessity for rules of some sort. "No code," may be extremely interesting as a theory, but it invariably has commercialism as its underlying basis.

The action of the New York Commissioners is distinctly hurtful to the profession, because it introduces an element of discord and distrust, and breeds unnecessary antagonisms. The dismissal of fifty-two physicians from hospital appointments, without warning and without just cause, is not a spectacle to be viewed with pleasure, or even equanimity, by the general profession, and we feel sure that the colleges would have acted wisely if they had acted with less speed, and contented themselves with controlling the appointments as vacancies arose on the staffs of the various hospitals, without resorting to so radical a violation of the ordinary rules of courtesy between gentlemen.

THE ARMY EMERGENCY RATION

A valued Eastern weekly journal of medicine and surgery in its issue of November 30 last, under the heading of "The Army Ration," announces the failure of the recent efforts of the military authorities to decide upon an emergency ration for troops in active service. It gives an extract from a report of the experiences of a company of the Seventh Infantry on a march from Denver, Colo., while subsisting on an emergency ration proposed by the department board convened in Denver. The report shows that the soldiers started out with ten days' rations, but the campaign was brought to an abrupt end after four days of fifteen-mile marches. The food not only failed to satisfy the hunger or give strength, but seemed to irritate the stomach. After the first meal two of the enlisted men had to be placed under the surgeon's care. At the end of the second day thirty of the seventy men in the company were ill, and on the fourth day the whole command went into camp, and couriers were sent to town for hard-tack and ordinary coffee and bacon. Some of the soldiers were seriously ill with a stomach complaint and were confined to the hospital for several days.

Our esteemed Eastern contemporary explains all this by stating that "The stomach pouch is constructed with a certain capacity for food which can not be gainsaid by any chemical formula which mere human ingenuity may create or theoretical reasoning devise. Each of the varied and subtle processes of digestion must necessarily adapt themselves [*sic*] to the construction and functions of an organ that has a purely vital as well as a merely chemical duty to perform. The stomach must earn its living in its own way, as by such purely physiologic effort in bringing each and all of its mechanical, vital and chemical functions into play, it can best maintain its health, activity and usefulness. No prepared or concentrated food can relieve it of any or all of its activities in that gradual conversion of a legitimate quantity and quality of food that constitutes a natural and perfect digestion. In such an aspect a moderately full stomach is something more than a feeling. Its work must be distributive rather than restrictive. It must be healthfully distended with food, bulky enough to occupy spare places, otherwise its most important function is hampered, while for lack of mechanical stimulus the intestines become stagnated into almost helpless inactivity. Hence, it is easy to see how the experiments failed, and the victims paid the penalty of outraged physiologic laws."

All this might have been accepted as very sound physiologic doctrine had the troops been restricted to a concentrated food which had no bulk in the stomach; but as a matter of fact they did have in the ration sufficient to give that distension which is "something more than a feeling," for the smallest emergency ration tested in any of the eight Military Departments weighed 22.0 ounces, the largest 32.25 ounces, and the particular ration which caused the harfmful effects in the trial above mentioned 27.25 ounces; the nitrogen of the smallest amounted to 201 grains, of the largest to no less than 569 grains; the carbon of the smallest weighed 3,543 grains, of the largest 5,302 grains, while the value in calories of the smallest was 2,134, of the largest 3,526. From these figures it may be observed that none of the departmental boards went below an average diet as regards potential energy, in the proportion of nitrogen to carbon nor in the quantity needful to give the stomach its healthful distension and the intestines something to do to prevent them from being "stagnated into almost helpless inactivity." The stomach complaints affecting the Denver company were due to faulty preparation of the bean-soup tablet, not to a concentration of nutritious principles which gave the stomach no work. At the end of the second day thirty of the seventy men were ill. We believe that the stomachs of seventy men, taken at random, will submit to a total absence of food for two days without the supervention of any serious stomach complaint. There must have been something other than mere want of bulk to occasion the sickness of the men, and this something is readily found in the insufficiently cooked starch grains of the bean-soup tablet. Samples of the same ration have recently been used by the Seventh Cavalry in Arizona without any harmful affects, the only unfavorable criticism being that the soup wanted more seasoning.

We consider it premature to call the efforts of the military authorities a failure because one experiment of one of the eight departmental boards gave unsatisfactory results Instead of being failures, we understand that the experiments of these boards have contributed much to the perfection of an emergency ration for the troops, and it is probable that a board of officers, in which the line of the army and the medical and subsistence departments will be represented, will be convened in Washington to consider their reports and to make the necessary investigations and experiments which will lead to the preparation and adoption of a suitable emergency ration

A THEORY OF THE CORTICAL PATHOLOGY OF PERMANENT DEMENTIA

The JOURNAL has more than once had occasion to notice the suggestive articles that appear from time to time in the medical press, inspired by the latest discoveries in the finer anatomy of the nervous centers A very recent one of this class is that of DR H J BERKLEY in the *Medical News* of November 9, entitled, "A Theory of the Causation of Permanent Dementia" Referring to some former researches which demonstrated that non-medullated nerve fibers are hard to find in the cerebral cortex, he assumes that probably there are none there that can be strictly classed as such, and that the conduction must be direct through the fiber to its termination, that naked axis cylinders ought to be a physiological impossibility in the cerebrum, for, if present, they could only give rise to irregular overflow of stimuli with corresponding confusion of thought and action The so-called psychic cells, however, the pyramidal cells with long and short ascending processes, are distinguished from the other cortical nerve elements by the richness of their protoplasmic processes in lateral buds or gemmules, and it is through these, he holds, that the axons influence the protoplasm of the dendrons and the cells, their uncovered free endings coming into close contiguity with these gemmules, whose function it is to receive the nervous impressions of the fibre to transmit them to the protoplasm of the dendron and thence to the cellular body When these gemmules fail in their function through disease, or are lost, the proper conduction of the nerve impulses, according to DR BERKLEY's theory, is impossible The first result is confusion in the psychic functions and, with the advance of the morbid process, coordinated thought is finally abolished as far as the affected apparatus is concerned, and with the extension of the process terminal dementia is the result The gemmule-bearing protoplasmic processes of the nerve cell being the most sensitive and vulnerable are first affected, but later the cell body itself degenerates and plays an important part in the production of the ultimate result The axis cylinders themselves are less vulnerable to morbid or toxic influences and their involvement only occurs after the practical death of the body cell, and therefore plays no special part except in case of actual inflammation DR BERKLEY has seen neurons with their processes totally degenerated and their cell bodies reduced to stumps, with their axis cylinders as perfect as those of the normal cell

In short, therefore, the theory of BERKLEY as to the pathology of dementia is as follows The conduction of nerve stimuli to the cell corpus is through the medium of the lateral gemmules of the protoplasmic processes, that these are specially liable to injury from toxic or morbid influences, and are the first portions of the neuron to atrophy and disappear in certain diseases of the brain, that with their atrophy and consequent loss of function we have, first, confusion and incoordination of psychic functioning, and finally with any widespread degeneration of the cortical elements a permanent dementia ensues

His conclusions have been deduced partly from examinations of human brains and partly from experimental investigations on animals He gives with his paper a reproduction of micro photographs, showing the normal primordial process of a well-educated man taken from an autopsy immediately after death, and of a corresponding process from a subject of terminal dementia, showing the atrophy and absence of the dendritic gemmules

DR BERKLEY's theory is at least as probably the correct one as any that has so far been advanced, and it is as well supported by clinical and experimental observation as any It has, moreover, the merit of going no further than is reasonably warranted by the facts he adduces, and does not, like the ingenious and suggestive theorizing of ANDRIEZEN, attempt to demonstrate the pathological conditions of all the elements of the mental derangement, requiring the assumption of special psychic functions in this and that particular cortical layer for which no adequate proof is or can be afforded It is simply a theory of the pathology of general mental failure, apparently based upon well observed facts, and because it attempts no more is the more worthy of consideration It is not merely a suggestive theoretical paper, but is an actual and valuable contribution, and if confirmed by further investigation will be a real addition to our few positive facts as to the cortical pathology of mental disease

VALERIANATE OF QUINIA AS A PROPHYLACTIC OF MALARIAL FEVER

DR LUIS CENDRERO contributes to the *Boletin de Medicina Naval*, August, some clinical facts regarding the use of this remedy at a very trying location in the Gulf of Guinea, in West Africa The writer's station is on the little island, or cluster of islands, of Elobey, north of the mouth of the Gaboon river, and is under the Spanish protectorate His position in charge of the marine service at that point has afforded him ample opportunity to compare the efficacy of the different drugs principally preparations of quinia, against unusually severe forms of malarial fever "So severe is this scourge, says the translation of Dr Cendrero's report in *Sanitarian*, November, "that without exaggerating, all or very nearly all the persons connected with the Spanish service seem to be sent to the hospitals for malarial patients, once, twice, and even three times a month On account of this grievous situation I was led to try some medicinal prophylactic measures, and having used the sulphate of quinia in doses of 20, 30, and 40 centigrams a day without success, looking for a more satisfactory result, I obtained much benefit from the use of the valerianate of quinia, although, even with the use of this salt, I did not obtain all the relief I desired"

The summary of his experiments is as follows "The first consisted in giving a third of a gram a day of the valerianate of quinia, causing it to be taken in my presence in the morning, a little after breakfast, to one-half of the men who formed the corps under my care, leaving the other half without any treatment At the end of the month, the result was that the seven who had no prophylactic treatment suffered from the fever, some twice, some three times during the month, while those who were treated remained entirely free from fever

"The second test was exactly the reverse of this—the seven who were treated with prophylactic remedies during the preceding month were left during the present period without treatment, while those who were not treated now took the remedy as their comrades did the month before Those without medicine were attacked, some more than once, and of those now treated only two had very slight attacks

"The third and last observation was somewhat different To all the men, doses of valerianate of quinia were given as above, during the month and a half, and the result of this test, as compared with the condition before preventive measures were employed, was that only eight entered the infirmary with fever, while in the same time, previous to treatment, there were thirty-five, the average being taken for the whole year, with malarial fever"

Before these experiments, the sulphate of quinia and the preparations of arsenic had been used with variable and not fully satisfactory results The sulphate, used in a systematic way, had many successes to its credit, and in the absence of the valerianate operated well, especially in the recrudescence of endemic fevers

Blank applications for membership in the Association at the Journal office Write for them, sent free

HYPNOTISM AGAIN

The *New York Medical Record* takes exception to an editorial in the Journal of Nov 16 on "The Passing of Hypnotism" It says that to say that hypnotism has had its day is a curious statement to make considering the interest that German physicians are taking in the subject at the present time Does Dr Shrady refer all medical questions to the standards and practices of German physicians?

The "practical side" that has come to stay, understanding thereby the legitimate use of suggestion in therapeutics, was duly recognized in our editorial, the "sensational side," or the production of hysteroid disturbances of consciousness for therapeutic ends, or practically and essentially what is known both in and out of the medical profession as hypnotism, is, the editor of the *Medical Record* states, certainly dying out In our editorial we did not go so far as that, but merely said its day had probably well passed its meridian There are still some able men experimenting with it and advocating it, and his statement in strict truth is a little premature As a prophetic anticipation it may pass, but it was hardly so intended

Undoubtedly hypnotism will fill a large place in medical literature, it is an attractive subject in many of its relations But as regards its usage as a therapeutic agency, not including in it the legitimate use of waking suggestion, history is repeating itself and its medical standing, we hold, is on the wane Its most enthusiastic advocates can not claim any general support for their views except in so far as a very limited and somewhat dubious utility may be admitted

CORRESPONDENCE

Illinois State Board of Health vs Northwestern University Woman's Medical Society

To the Editor—In the July issue of various prominent medical journals appeared a letter from the Illinois State Board of Health accompanied by a set of resolutions adopted by said Board The undersigned, the Executive Committee of the Faculty of the Northwestern University Woman's Medical School, having carefully investigated this matter desire to make the following report, in order that no injustice may be done to the State Board

The resolutions adopted by the State Board are as follows

Whereas, The Faculty of the Northwestern University Woman's Medical School adopted a set of resolutions, criticising the Illinois State Board of Health for having issued to three non-graduate students of said college the State certificate entitling them to practice medicine, whom they claim were not entitled to receive them, and charging the Board with having adopted a lax policy in numerous other instances, thereby seriously detracting from the usefulness of the Board, and

Whereas, Although the resolutions were "ordered to be placed before the Illinois State Board of Health," they were furnished to the various medical publications of the country simultaneously with their presentation to the Board, and before the Board had an opportunity to make any defense, and

Whereas, The said college had not made any investigation of the methods or policy of the Board, and could not be in possession of information upon which to found such serious charges, and

Whereas, The Secretary of the Faculty admitted to the Secretary of the Board that the resolutions were adopted without due consideration, and were not so applicable to the present Board, and

Whereas, In the past two years no certificate has been granted to any applicant upon any average rating less than 80 per cent on all branches, and the questions and examination papers, and a tabulated record of all examinations are preserved and are matters of record in the office, and

Whereas, It is not in the province of the Board to adopt any policy regarding the admission to its examinations of non graduates, the law prescribing that "non graduates shall submit themselves for examinations" and further prescribing that "the examinations shall be of an elementary and practical character," therefore, be it

Resolved, That justice demands that the Faculty of the Northwestern University Woman's Medical School, and all others interested, inform themselves as to the methods and policy of the Illinois State Board of Health in conducting its examinations, with a view to the establishment of the charges made, or of making such withdrawal, alteration or explanation of the charges as the facts may warrant, and *further, that the Faculty inquire as to whether any individual* interest or personal animosity prompted the drafting and circulating of the resolutions

(Signed) B M Griffith, M D
Sarah Hacket Stevenson, M D

The original resolution of the Faculty of the Northwestern University Woman's Medical School, to which the above refers, is as follows

Whereas, *On three occasions* within the past three years, the Illinois State Board of Health has licensed to practice medicine in this State students who have not properly qualified *themselves for such duties* and whose incompetence has compelled us to withhold the degree of Doctor of Medicine, and

Whereas, By common report we are informed that the State Board has adopted a similar policy with reference to numerous other persons, therefore,

Resolved By the Faculty of the Northwestern University Woman's Medical School, that the State Board of Health be requested hereafter to make its examinations so rigid that persons incompetent to obtain the degree of Doctor of Medicine from first-class medical colleges can not obtain licence to practice from the Illinois State Board of Health

Resolved, That the State Board of Health be urged to do all in its power to secure a modification of the State law, so that the privilege of examination for license to practice in this State can only be obtained by graduates of recognized medical schools in good standing

Resolved, That for the protection of the lives and health of our people, we believe it is the duty of the State Board of Health to do all in its power to prevent the entrance into the medical profession in this State of any persons not properly qualified, and further

Resolved, That, in the interests of humanity and medical science, we believe the State Board should make its standard of qualifications as high as that of the best medical colleges in this country, and that it should do all in its power to aid and encourage the efforts of the profession and the people for thorough medical education and higher requirements of licentiates and for the degree of Doctor of Medicine

(Signed) Marie J Mergler, Secretary

Replying to the State Board of Health, we beg to state that after thorough investigation we find that not only the three incompetent undergraduates referred to in our resolutions, but others similarly conditioned from our school, have been granted license to practice medicine, and we find further that it is believed by medical teachers and other members of the profession, that the State Board of Health has frequently conferred the license to practice in the State of Illinois on undergraduates whose requirements were not sufficient to enable them to obtain the degree of Doctor of Medicine from the medical schools of the State that are recognized as in good standing by the Board of Health

This policy is not calculated to advance the standing and active usefulness of the medical profession, or to protect the public from incompetent practitioners The Board of Health and its individual members have been *repeatedly* urged to discontinue this practice but as these remonstrances have heretofore proved unavailing, the Faculty of the Northwestern University Woman's Medical School determined by public action to bring the matter to the notice of the profession, hoping thereby to obtain their aid in securing a better policy by the State Board

The Board is in error in thinking that the Faculty acted hastily or without investigation, for it was familiar with the fact of the licensing of incompetent persons, not only from among *its* students, but among students of other schools This practice has been in vogue since the first organization of the Board, but the last cases were, if possible, more flagrant and inexcusable than those which preceded them

The Secretary of the State Board of Health is mistaken in stating that the Secretary of the Faculty of the Woman's Medical School said that the resolutions were adopted without due consideration, though another member of the Faculty did admit to him that, if his statements were correct, the criticisms were not so applicable to the present Board as to former Boards, however, the Secretary is not aware that the practices of the present Board differ materially from those followed by earlier ones composed of a different membership

Shortly after the original resolution was passed, the Secretary of the State Board of Health interviewed several members of the Faculty, and on one of these occasions stated, in extenuation, that the particular individuals now in the State Board of Health constituted an entirely different Board from that of former years We are aware that the State Board of Health changes more or less from time to time in its personnel, but one of the signers of the series of resolutions under consideration has been a valued member of the State Board for many years, and we can not understand why he should have allowed such a practice as granting licenses to incompetent persons at any time, without a vigorous protest

If the policy of the Board as now constituted is better that of former years in this respect, it appears to be only a degree, for the same official, in one of these interviews, stated that no applicants for license were now passed on an average of less than 85 per cent on all branches, whereas the resolutions printed above place it at 80 per cent, but he also admitted that formerly applicants were passed on a grade of 50 per cent It must be borne in mind that the grade obtained on an examination depends upon the nature of the questions, the fairness with which they have been given out, the honesty with which they have been answered, the care taken to prevent cheating, the fairness with which they have been marked, and the qualifications of the examiner Questions may be peculiarly easy, proper care may not have been exercised to prevent them from falling into the hands of the applicant beforehand or to prevent communication by the interpreters or others at the time of the examination, or the examiner himself may have marked too high For example An examiner who knew very little of anatomy might consider a very poor paper on that subject of exceptional excellence

The Secretary of the State Board explained to us his efforts to prevent cheating among applicants for midwives' licenses, and he led us to infer that similar precautions were taken for those taking the medical examinations He asked if we questioned the honesty or ability of certain members of the Board of Health, but, as we stated to the Secretary thereof, we can not understand how an ignorant person, unable to obtain a grade of more than 35 or 40 per cent on an ordinary examination for the degree of Doctor of Medicine, can come before the State Board within three, six, nine or even twelve months afterward, and pass an excellent examination Teachers know that it is impossible to acquire a knowledge of medicine with this rapidity Therefore, the inference would be that 80 or 85 per cent by the State Board of Health is equivalent to little more than 35 or 40 per cent by the colleges If this is so the State Board should raise its mark still higher, or mark more carefully

It was also admitted in one of these interviews, that one of the persons referred to was in no way fitted to practice medicine, but it was claimed that the answers obtained from her in examination were excellent, and that the Board had no option in the matter As a possible explanation of the excellence of the papers handed in by ignorant applicants, it was suggested that any one could "cram" and pass a good examination on two or three subjects, and it was explained that it was the custom of the Board of Health to give those taking their examinations full credit for each and every branch in which they succeed in obtaining a passing mark, though they *might* utterly fail in all others It will be readily seen that in an extreme case this policy would allow an applicant to pass one branch at a time every three months (we believe the examinations are quarterly), until the whole had been gone through with, while at the time the license was granted the person might not be able to obtain a general average of over 25 per cent We are not informed, officially or otherwise, that the Board has even yet taken any step to correct this bad practice

It is stated in these resolutions that the Illinois State Board of Health is not at liberty to adopt any policy regarding the admission of non-graduates to examination, that is, persons mentally or morally unfit to practice medicine must be admitted to the examination if they apply, but certainly the law can not require the Board to issue licenses to such persons In our resolution we called upon the Board, if there were defects in the law, to make all proper efforts to have them remedied We have not been informed, either publicly or privately, that it has made any effort in that direction

In the resolutions by the State Board of Health we are told that the law demands that the examination shall be "elementary and practical" Though the law under which the Board of Health acts prescribes that examinations shall be of an elementary and practical character, it does not prescribe that the Board of Health shall confer on incompetent persons the privilege of practicing medicine in Illinois, and the Legislature surely could have no such purpose in view when it enacted the law If an applicant can pass a thorough examination in the elementary subjects of anatomy, chemistry, physiology and materia medica, and a practical examination in pathology, obstetrics, practice of medicine and surgery, he would be able to pass the examination for the degree of Doctor of Medicine in almost any of the recognized colleges throughout the United States

We deeply regret that the resolutions of the State Board of Health failed to remove the belief that their methods are faulty, and we personally know another student who obtained license to practice during the past year who was unable to pass the examination for the degree of Doctor of Medicine this last spring We have informed ourselves so far as possible of the methods and policy of the Board of Health, and we gladly embrace this opportunity to do it exact justice The Faculty of the Northwestern University Woman's Medical School does not need to disclaim the suggestion that any individual interest or personal animosity prompted the drafting and circulation of the resolutions This faculty, individually and collectively, is friendly to the Illinois State Board of Health, but in the matter under consideration it has been constrained, as a matter of public duty, to question the wisdom and propriety of some of its acts We will gladly be the first to give it credit when it corrects its faulty practice, and we will gladly aid it in securing any necessary legislation for elevating the profession and for the benefit of the people

I N DANFORTH,
E FLETCHER INGALS,
MARIE J MERGLER,
Executive Committee

Serum-Therapy in Leprosy

NEW YORK, Nov 21, 1895

To the Editor —Mr Luther F McKinney, United States Minister in Bogota, writes me (Oct 17, 1895) "I enclose an article written by Dr Putnam of this city, in which I know you will be interested Dr Putnam has taken a great interest in the subject of leprosy and, as you will see, believes in the theory that the disease can be cured by the injection of the blood of an animal previously inoculated with the serum from the blood of a leprous patient He has one patient, a woman here in Bogota, whom he has been treating in this way for about four months When she began there was an entire loss of sensibility of the arms and lower limbs, and large leprous blotches or sores on her arm She has entirely recovered the sensibility of the arms, but not of the lower limbs, the blotches on her arms have entirely disappeared, so says the Doctor There are ten physicians here who are watching the case with great interest and have great hopes that extraordinary results will be obtained The great trouble here is that there is no laboratory for the proper preparation of the serum, and the lack of proper apparatus for the carrying on of the experiments very greatly retards the investigations To show how the medical profession is hampered in their efforts to stay this foul disease, some time ago Dr Putnam wrote a letter to the President of the Republic, explaining to him his theory and saying that he proposed to carry on the work and visit every part of the country where leprosy existed, and called the attention of the Executive to the assistance rendered by other civilized governments in the development of the scientific study of these diseases, and suggested that the Government provide a laboratory for the purpose of assisting in the work The President instructed the Minister of Education to answer the letter, and say that while he thought the purpose of the Doctor was good, it was a matter of personal interest, and the Government did not desire to have anything to do with it And this while there are 27,000 lepers in the country, and the Minister who answered the letter lost his wife by the disease, and has two leprous daughters in his home at the present time In about a month Dr Putnam will visit the hospital again, and he says the first leper who dies while there, he will get a portion of the skin, muscle, liver and brain and send them to you"

The article which Mr McKinney enclosed to me is entitled "Sero-Therapy," and was published in the *Herald* of Bogota, Oct 10, 1895 In it he makes a report of a medical visit to the Lazaretto of Aqua de Dios, and the sero-therapeutic medication which he has begun there in a formal manner in the treatment of leprosy He refers to an official offer, made by him on the 22d of last May, to carry on the project of establishing sero-therapy in Colombia He had already begun this treatment on some private leper patient before going to Aqua de Dios He refers to a grand lecture given by Dr Juan de Dios Carrasquilla, in the Policlinic of Bogota, the 1st of last July, on this subject This lecture has guided him in his experiments, and Dr Juan de Dios Carrasquilla will be his consultant in future At Aqua de Dios he obtained a leprous serum to be inoculated in several animals in a manner advised by Professor Ricket in syphilis, and which consists in taking some blood from the patient, inoculating the animal and returning from the animal to the patient "In one word," says he, "to make the cultivation of the leper bacillus in the blood of an animal, instead of making it in a special apparatus for the purpose of strengthening natural immunity in the animal, for the experimental infection" He visited the hospital with the Rev Father Crippa Salesiano, who has devoted himself to the patients, and Dr Luis L Gaitán, physician of the Lazaretto, and selected an adult of 16 years, in whom tubercular lepra was in full development He took from his arm 250 grammes, into an aseptic bladder, and put the latter carefully away, leaving the blood in repose for four hours during which he prepared the animals for the inoculation There were two asses and three she-goats At the expiration of the four hours he separated the serum and inoculated a certain quantity into the animals These animals were to be kept under supervision for several days With the blood serum of these animals he intended to inoculate thirty or forty patients early in November

Mr McKinney encloses me the reply received by Dr Putnam to his application to the Colombian Government

"REPUBLIC OF COLOMBIA, OFFICE OF SECRETARY OF THE GOVERNMENT No 2540

BOGOTA, Oct 17, 1895

DR CARLOS E PUTNAM—

Sir Regarding your report with respect to the installation of the sero therapy in the Lazaretto of Aqua de Dios, I have to answer that the Government, reiterating to you its manifestions of approbation and very much interest in the success of the experiments which you have undertaken with so much devotion, will give to you all the moral support necessary, so that you may not be discouraged for continuing such a praiseworthy enterprise"

Dr Putnam writes me 'We have 27,000 lepers! We do nothing for them! The acting Government pays no attention at all! We are lost!"

"Think of offering a starving man moral support," says Mr McKinney "Unless the Government takes the matter in hand the country is lost indeed Forty years ago there were 400 lepers in Colombia, now there are more than 27,000 How many at this rate of increase will there be in forty years from now?"

ALBERT L ASHMEAD, M D
270 W 43d Street

From the Shepherd Magnes

Chicago, Nov 28, 1890

To the Editor —To settle a dispute, will you kindly give us the origin of the term magnet as applied to the lodestone or magnetized iron Truly yours,

A Medical Student

Answer It is said by Nicander (according to Pliny) that a certain shepherd, named Magnes, when taking his flocks to pasture upon Mt Ida, found in a certain spot that the nails of his shoes and the iron ferule of his staff adhered to the ground After the announcement of the discovery the lodestone was called the Magnet

PUBLIC HEALTH

Bacteria in Ice —The dangers incident to the consumption of ice obtained from polluted sources, as lakes or ponds re ceiving sewage, have been much insisted on, and not only have actual instances of the communication of enteric fever in this manner been quoted, but the bacteriologic examina tion of different samples of melted ice have been adduced to show that the process of freezing has no influence on the number or vitality of the microbes Ice water, for example, from the Spree, has been found to contain 1,700 to the c cm, and from the Lake of Geneva 210, while melted hailstones yielded 72 But the recent experiments of Professor Christomanor of Athens, go some way toward justifying the old and popular belief in the purifying action of congelation, which, as he shows, effects a partial separation of all impurities, concentrating them in the inner portion of the mass Examining blocks of artificial ice from a factory supplied by a well, and others of water from the aqueduct of Hadrian, he observed in all a central core, forming about a fourth part of the entire volume, and, in its whitish, dull, somewhat granular appearance contrasting strongly with the perfect and colorless transparency of the surrounding ice While the original water from the aqueduct contained 30 milligrams of "organic matter" (solids lost in ignition?) in the litre, that from the clear ice showed only 2 8, while the turbid central *portion gave* 105.5 So with the water from the well, the 64 milligrams in which were divided in the ice into 5 5 and 202 milligrams per litre respectively It is remarkable that, though the *one* water was charged with organic or presumably organic, impurities to the extent of more than twice as much as the other, the relative proportions in which these were distributed in the ice were practically identical, being respectively as 9.3 and 351 6, and 8 6 and 311.8 to 100 *parts, or* roughly, 1-11 of, and 3 to 3½ times the impurity of the water —*British Medical Journal*

Sanitary Hints for Travelers to Venice and the Adriatic —A medical contributor to the European edition of the *New York Herald*, writes upon the above subject, *from a personal* and repeated experience as a sojourner at Venice He points out, in the first place, that the rate of mortality in that city in 1894 was 22 3 per 1000, making about the twentieth in the list of healthful great cities He also gives the following sanitary data for the use of visitors

"The stranger on arriving in Venice must take certain precautions In winter one must protect oneself from dampness, go out little in the evening, wear flannel, take long walks and beware of the poetical gondola In summer care must be taken not to catch cold while listening to the music on the Piazza San Marco, an overcoat should always be carried on the arm In the restaurants travelers should not allow themselves to be tempted by oysters or shellfish which so often occasion very disagreeable cases of enteritis, under no pretext should *any* ice be used *in the* drinking water, which should only be cooled exteriorly These last two pieces of advice are absolutely essential, their non observance is one of the chief causes *of the* gastro intestinal disorders that occur in Venice during the hot weather This year, during the intense heat of September, the number of such cases was very high, whereas it would have been very easy to avoid them by regulating the diet more sensibly

"The city, so *wonderful* in light, art and history, which still carries proudly its ancient title of Queen of the Adriatic, has a strange attraction *for every one* who has *once* put foot in her streets When one has once been to Venice one goes again, and each time one returns something new, something not yet seen, seizes your attention and fascinates you like a dream that one suspects of being reality

"The absence of dust in the atmosphere of Venice, its pavements in large flagstones, the saline dampness of the air, and the high atmospheric pressure form an excellent group of conditions for lessening the spread of consumption, and in the statistical tables that were furnished to me I remarked that the death rate from pulmonary phthisis was relatively very low Thus on an average there is in Venice *only one death from consumption per ten*, whereas *in* Paris the proportion is double—two in ten This is a very interesting fact which may lead us to send to Venice, possibly not *chronic cases of phthisis, but persons with a predisposition* for the disease and in danger of picking up contagion It is evident that in sending a consumptive to Venice it would not do to choose a torpid case, but patients that are nervous, anemic and excitable ,

"A splendid aqueduct, built about ten years ago, brings to the city a supply of spring water from the mountain Since that date the sick rate from typhoid fever has considerably diminished, and gastric fever, formerly so common, is now much rarer, and since it also now assumes a far less serious character it is much easier to cure Great care must be taken not to drink well water which is always more or less contaminated by infiltration and which must contain microbes or impure elements which were probably not without their influence on the bad reputation the city used to have from a sanitary standpoint

' In Venice apartments on the upper stories of the houses are certainly healthier than those on the lower, which, strange to say, are always more eagerly sought after It is, perhaps, better form to live on the first floor, but it is healthier on the second or even on the third The Venetians themselves are quite alive to this fact, as in the old palaces the finest apartments are on the first floor which is raised as high as possible by an entresol"

Health Reports —The following health reports have been received by the Supervising Surgeon-General, Marine-Hospital Service

SMALLPOX—UNITED STATES

Louisiana New Orleans, November 16 to 23, 9 cases, 2 deaths

Michigan Detroit, Rochester and Three Rivers, November 16 to 23, smallpox reported present

Missouri Charleston, November 23, smallpox reported present

Pennsylvania Philadelphia, November 16 to 23, 3 cases, 2 deaths

SMALLPOX—FOREIGN

Antwerp October 26 to November 2, 1 case, 1 death

Buda-Pesth November 4 to 11, 1 case

Cairo October 29 to November 4, 1 death

Dublin November 9 to 16 2 deaths

Madrid November 5 to 12 13 deaths

Manchester November 2 to 9 2 cases

Montevideo October 19 to 26, 6 cases, 1 death

Naples November 2 to 9, 1 case, 1 death

Odessa November 2 to 9, 5 cases

Rotterdam November 9 to 16, 1 case, 1 death

CHOLERA—FOREIGN

Egypt To November 15, 759 cases, 604 deaths

Hong Kong September 14 to 21, 3 deaths

Osaka and Hiogo October 19 to 26, 3 cases, 1 death

YELLOW FEVER—FOREIGN

Cienfuegos November 17 to 24, 2 deaths

San Juan, Porto Rico October 12 to November 2, 31 cases, 8 deaths

Santiago de Cuba November 16 to 23, 20 deaths

Vera Cruz November 14 to 21, 2 deaths

NECROLOGY

Elman H Borst, M D, of Newburgh, N Y, died Nov 8, 1895 He was graduated from the College of Physicians and Surgeons, N Y, in 1889 At the time of the West Shore wreck at Newburgh in 1893, as surgeon *in* charge of St Luke's Hospital, he rendered very efficient service He was a *native* of Cobbleskill, N Y, born there thirty-two years ago, the son of Susan Vrooman and Isaac Borst The cause of his death was pneumonia, consequent upon typho-malarial fever

Wm Starbuck Mayo, M D, of New York city, and member of the University, the Authors' and Century Clubs, traveler, literateur, and toward the close of his life somewhat of an inventor, was born in Ogdensburg, N Y, April 20, 1812, and died in New York, Nov 22, 1895 He was a descendant from the Rev John Mayo of an ancient English family, who came to New England in 1630 and became the first pastor of the South Church at Boston On his mother's side Dr Mayo belonged to the Starbuck family who were among the earliest settlers of Nantucket Having graduated from the College of Physicians and Surgeons, N Y, in 1832, he at once entered upon the practice of his profession in New York, the while profiting much by hospital studies, but eventually set out to make a tour of exploration to the interior of Africa He was obliged, however, to limit it to the Barbary States, and after an excursion in Spain to return home Beside contributions to magazines and newspapers, he published "Flood and Field, or Tales of Battles on Sea and Land" (1844), "Kaloola, or Journeyings to the Djebel," "Kumri" (1849), "The Berber or the Mountaineer of the Atlas" (1850), "Romance Dust from Historic Placer" (1851), and "Never Again" (1873) He wrote dramatically, and his pages are crowded with incidents

Benjamin Cushing, M D, of Boston, Mass, who died October 16, was a man ripe in years, honors and esteem of his community He was in his seventy-third year, and had been nearly a half century in his profession He was a Harvard graduate in arts in 1842, and medicine in 1846 The *Boston Medical Journal* contains the following tribute to his worth

"The exalted character of Dr Cushing, his integrity, his sincerity, his desire not only to make his own life useful but to aid others in making their lives more useful, his devotion to his profession, his great abilities, his kindness and benevolent and sympathetic nature had endeared him to all hearts He has ended a useful life He has ministered to many His name is cherished by all Younger men in the profession owe to him a debt of gratitude that can only be repaid by imitating the example he set them, and by practising medicine along the lines of high and ennobling virtue and devotion to right principles that he taught in all his councils, and illustrated and examplified in his life They will have to remember forever his valuable suggestions, his ever-ready sympathy and assistance, his universal and respectful recognition of their merits everywhere and at all times We, to whom it was given to avail ourselves in every emergeney, without dread of intrusion, of his extended experience, his great wisdom and his wonderful skill, know, perhaps, better than others can know, that the community has sustained a loss that is only saved from being irreparable by the influence that he has exerted in raising the standard of professional attainment, manliness and true nobility, in his neighborhood, to a level with his own"

Cary B Blackburn, M D, of Louisville, Ky, December 4, of acute pneumonia He was born in Woodford County, Ky, and studied medicine under the late Prof S D Gross He served with distinction during the civil war, and in 1868 removed to Louisville, where he has since resided He was a prominent politician, having served for fifteen years as a member of the City Council

Milton R Cook, M D, of Ashtabula, O, one of the oldest practitioners of the county, died in jail where he was confined pending trial upon the charge of performing a criminal operation

J F Shepherd, M D, of Owensville, Ohio, while out driving, was thrown from his buggy and almost instantly killed by breaking his neck

MISCELLANY

Congress of Surgery of France—The next Congress of Surgery of France will be held in Paris in 1896 Professor Terrier has been named as President, M Gross, of Nancy, Vice-President, MM Bandoin, Coudray, Mauclaire and Rebland as Secretaries

Prof A C Cotton.—At a recent meeting of the Société Francaise d' Hygiène, Dr A C Cotton, City Physician of Chicago, was elected a foreign associate member of the Society

An Auction of Gems for Charity—An auction of jewelry took place in New York City, on November 19, for the benefit of the Children's Grounds—to include a play-house and playgrounds at Fairmount Park, Philadelphia The first day's sale netted not less than $50,000, and it is stated that the sale was unique as including gems of a value that had never before been offered for sale under the hammer The gems were originally the property of the late Miss Sarah A Smith, of Philadelphia

Dr J L W Thudicum, an eminent chemist of London, has printed a book called "The Spirit of Cookery" designed especially to meet the requirements of medical men The book purports to show the ethical and medical bearings of the culinary art, to contain a dictionary of culinary terms, as well as a system of general rules which will enable those who thoroughly master them to perform the principal culinary operations without reference to the frequently unintelligible records of the details of mere empiricism

Humane Police Club—Somebody has invented a policeman's club which has a rubber envelope and a wood core Messieurs the thugs, will be pleased to know that when this humane club is *once* in the hands of our guardians of the peace, there will be no more cracked skulls The near approach of the millenium is thus foreshadowed As usual, we learn that the new esthetic weapon has been tried upon a dog. His dogship, naturally enough, on regaining his canine wits, wagged his tail and in his own way expressed his pleasure in having been knocked out in so pleasant and altogether humane a way

A Fortune in a Book.—The custom of placing paper money between the leaves of a book for safety, particularly in books which are not likely to attract much attention, and forgetting all about it, was exemplified the other day when a Turin physician came upon a treasure of 40,000 lire The physician had to refer to a book upon clinics, which was in a bookcase in a library belonging to the family of Dr Giordano, who has been dead some two years This wonderful book contained some Italian rentes and a receipt for a deposit at the Banca d'Italia, altogether of the value of the above named sum The papers were, of course, handed over to the family of the late doctor

"Toxin A Novel"—The novel writer, Ouida, has adopted the above sensational title for her last book According to the review writer in the *New York Times*, the author takes pains to demonstrate, at least as clearly as she has done before, that she deserves to be classed with the degenerates He says further, "The characters in the book do things and say things that make us wonder and admire, and they love with mighty passion and hate with equal force In order to be in touch with the 'degenerates' of whom she is surely an early and conspicuous example, Ouida here enters into some particulars about disease which sensitive readers could spare The man with cancer of the food and air passages, and the details of the case of diphtheria are repulsive

The Medical Situation in Persia.—A young Persian, Dr Malik Yonan, an assistant at the Mission Hospital at Oormiah, in Western Persia, has written the following facts for the *Christian Herald* In Persia, the greatest need exists for medical missions It is said there are ten million inhabitants without a physician's care or attendance No hospitals or charitable institutions can be found outside of mission bounds, and thousands of the sick and poor are turned into the streets to die without help or remedy Some of the natives' attempts to bring relief are futile, especially so among the Mohammedan families For example, a priest will write a few words from the Koran on a slip of paper, and will dip the paper in water, and give it to the patient to taste (a hundredth solution of truth!) The two mission hospitals in Oormiah are doing an immense amount of good, and are crowded with patients from near and far, some coming from the distant Kurdistan Mountains The Mohammedan women say they are next to heaven and the wild Koords receive kind attention and treatment, and learn that the religion of the missionaries is far different and nobler than their own No branch of missionary work represents or accomplishes such a systematic amount of good and mercy as medicine

Another Hospital for the Insane in Illinois —Having hospitals for the insane for all other points of the compass, the Illinois Legislature, at its last regular session, established a new one to be called "the Illinois Western Hospital for the Insane," $100,000 was appropriated to purchase a site in that part of the State, north or west of the Illinois river, to pay for the construction of fireproof buildings to accommodate the patients with all necessary apparatus and furnishings, and to maintain it until the appropriations of the next General Assembly are available The government of the hospital is to be vested in three trustees, not more than two of whom shall be from the same political party, their terms to be six years each, and their appointment made by the Governor and confirmed by the Senate They are to appoint a superintendent who can be removed by them at pleasure under whom shall be the direct management and control of the hospital He must be a graduate in medicine and surgery from some reputable medical college and of acknowledged skill in his profession And he, in turn, is to appoint a competent assistant physician who is a graduate of some legally incorporated medical college, to perform such medical duties in and about the care and treatment of the insane as the superintendent shall direct

A Young Medical Explorer of Africa —Dr A Donaldson Smith, a graduate in medicine of the University of Pennsylvania in the year 1889, has been temporarily lost to his friends in the wilds of Eastern Equatorial Africa On November 6, he had reached Aden on the Red Sea, on his way homeward bound He had not been heard from for a period of eighteen months, and no little anxiety had been felt by those interested in the expedition for the past few months Dr Smith entered Africa on the eastern coast a year ago last June, to push across the country of the Gallas and Masai to two lakes which have been recently discovered by another expedition, then on to the Victoria and Albert, his object being to carry out and complete the line of exploration from the lakes to the east coast, a distance of several hundred miles Dr Smith was accompanied by about one hundred and fifty Africans, and at first by an Englishman, who was subsequently obliged to return to London Dr Smith sent back some fine specimens of the flora of the region after he had been on his expedition a few months, for the Geographical Society of Great Britain, and some months later was reported to be pushing on, by another party whom he had met Aside from these evidences of his safety, there were none until the arrival of his recent cablegram, as the region which he has traversed is at the present time represented by a blank space on the map

Color Photography —The *Chemist and Druggist*, London, in commenting upon Professor Joly's modification of the heliochromatic method of photography, remarks that there is need for more attention to the chemic side of color photography It also adds "We are, therefore glad to observe from *Nature* that Otto Wiener is working at the subject in this direction, his object being the direct production of color by the influence of light upon certain chemic substances He has studied Lippman's method in contrast with the old processes of Becquerel, Seebeck and Poitevin In Seebeck and Poitevin's silver chlorids are used and the colors produced are body colors in these two cases The production of these body colors is a very mysterious process, but Wiener hopes that there will eventually be found a satisfactory solution of the problem To account for the production of the colors, he advances a remarkable theory which has a well-known analogy in comparative physiology Given a collection of compounds of silver chlorid and subchlorid of indefinite proportions, such as those which Mr Carey Lea calls by the collective name of 'photo chlorid,' we must suppose according to the modern kinetic theories, that they are undergoing a rapid series of successive modifications When the red combination happens to be exposed to red light, it reflects it without absorption, and will therefore no longer be affected or changed by it Similarly for the other cases This is another process of 'adaptation' The author describes some experiments which prove that this is the true explanation and points out the importance of this view, not only for color photography but for the production of colors in the animal world It is evident that Wiener is on the right track, and if others take up the matter in this way, some of us may yet see a true color photograph"

Regulation of Maternity Hospitals in Connecticut —No person shall keep a maternity hospital, or lying-in place, it was enacted at the last session of the General Assembly of Connecticut, unless such person has previously obtained a license therefor, duly issued by the mayor, or board of health of the city, or health officer of the town wherein such maternity hospital or lying-in place is situate Within six hours after the departure, removal or withdrawal of any child born at such maternity hospital, or lying-in place, the keeper thereof shall make a record of such departure, removal or withdrawal of such child, and the names and residences of the persons who took such child, and whatever disposition of such child or its body is made, and the place where it is taken and left, which record shall be produced by the keeper or licensee of said hospital, or lying-in place, for inspection by and upon the demand of any person authorized so to do by the mayor or board of health or health officer of the city or town in which such hospital or lying in place is located No keeper of any such hospital, or lying-in place, or any of his servants or agents, shall refuse permission to any person so authorized to make such inspection, to enter such hospital or lying-in place for the purpose of such inspection, and shall permit such person so authorized to inspect such hospital and all its appurtenances for the purpose of detecting any improper treatment of such child Every person so authorized may take and remove any article which he thinks presents evidence of any crime being committed therein, and deliver the same to the coroner of the county to be disposed of according to law The penalty for a violation of this act is a fine of not less than fifty nor more than five hundred dollars, or imprisonment not more than one year or both

Practical Notes

Treatment of Hiccough —In the treatment of hiccough M Matthieu proposes the following Let the patient breathe rapidly, deeply and regularly forty-five to fifty times a minute In many cases he was able to arrest the violent crises —*Journal de Médicine et de Chirurgie*, Nov 10, 1895

Evacuation of the Biliary Calculi by the Stomach —At a recent meeting of the *Société Médicale des Hôpitaux*, of Paris, M Hayem reported the history of a patient attacked with repeated vomiting, which resembled that found in pyloric stricture Under lavage, many times repeated, thirty-eight biliary caluli were recovered The patient recovered, but M Hayem was of opinion that a direct communication existed between the gall bladder and the stomach —*Journal de Médicine et de Chirurgie*, Nov 10, 1895

Treatment of Acne —According to the *Annals de Dermatologie* Bœck, finding that Dauphin oil (*Delphinium staphisagria*, 'stavesacre") inhibited the growth of bacteria in the skin, sought to utilize that property in the following formula for the treatment of Acne

℞	Camphoræ	80
	Acid Salicylici	50
	Sulphuris precipitatæ	10
	Zinci Oxidi	2
	Saponis	1
	Ol Dauphin	12

M Make one application each night, wash the face in the morning with soap and warm water The camphor in this mixture is for the purpose of masking the disagreeable odor of the oil —*Jour de Méd et de Chirurgie, Nov 10, 1895*

Sun Glass as a Cautery —Dr Shepherd, in the *Yale Medical Journal* for December, 1895, in an interesting article on "The Sun Glass as a Surgical Instrument," recommends the sun glass for the removal of growths where it is very desirable that no scar should be left and no contracting of tissue, as upon the face and eyelids In his opinion it is simpler than electrolysis, and less likely to leave any scar, for the reason that the electric needle usually pierces the skin, and the caustic action takes place from underneath the growth or disease He uses cocain before applying the glasses, and from his experience in the treatment of nevi, and the like, he is inclined to recommend its use in such cases

Treatment of Cholelithiasis —During the meeting of the Medical Society of Virginia held Sept 3 to 5, 1895, Dr Geo Ben Johnston read a paper on the Treatment of Cholelithiasis Dr J McF Gaston, of Atlanta, was present and took part in the discussion of the paper In the course of his remarks, he paid Dr Davis, of Alabama, a just compliment for his investigations Dr Gaston said

"That while the reader claimed only to present some points for discussion, he had occupied most of the ground ordinarily taken up by those familiar with gall bladder surgery There were, however, some matters not usually dwelt upon by writers, to which attention might be directed The first and most important consideration pertains to the treatment of cases in which there are gall stones in the gall-bladder and ducts, which call for removal by incision, and it is found impracticable to attach the sac of the gall bladder to the skin or the intestines, or to suture the wall of the duct In these cases it has been proposed to tampon the intervening space to the external opening with gauze, with or without medication By packing around with the gauze, and leaving the ends of the strips protruding, drainage is accomplished, and the bile or other discharge is kept from entering the peritoneal cavity While fresh bile is not found to be an irritant to the peritoneum, the vitiated discharge which takes place after obstruction proves hurtful, and should not be allowed to enter the abdominal cavity

"Dr W E B Davis has taken a prominent part in urging this mode of procedure, and has made numerous experiments upon inferior animals illustrating the advantage of introducing iodoform gauze into the wound for the purpose of walling off the intestines and other viscera, while it serves, by capillary attraction, to carry off the discharge

"This has been practiced by others with the best results, and to Dr Davis is due the credit of impressing upon the profession the advantages of this treatment in cases not admitting of the attachment of the gall-bladder to the external opening or the intestines, and in which it is found impracticable to close by suture an incision of the common duct after the removal of biliary calculi"—*Alabama Medical and Surgical Age*

Society Notes

Lackawanna County (Pa), Medical Society —The following resolutions were submitted by Dr J C Bateson and adopted by the Lackawanna County Medical Society, in the city of Scranton, Pa, Nov 12, 1895

Whereas, There is a widespread and growing practice on the part of manufacturing chemists and pharmaceutical companies to put up their products in original packages covered with advertising matter giving name, dose, by whom made, and a wide range of indications for use, so that the physician finds it most convenient or necessary to prescribe in this form and thereby unwillingly injure his own business, and

Whereas, Many of these manufacturers publish cheap journals for advertising purposes, thereby infringing on the domain of regular medical publications, having the effrontery even to ask physicians to pay them for advertising their own goods, therefore,

Resolved 1 That the Lackawanna County Medical Society disapproves of such methods and devices to introduce remedies and journals

2 That for mutual protection the medical fraternity is advised not to prescribe medicines put up in the manner indicated

3 That the State and County societies, together with regular medical journals, are invited to unite against these cunning schemes

The annual meeting of the County Medical Society was held in New York November 25 The following officers were elected for the ensuing year President, E D Fisher, First Vice-President, F Peterson, Second Vice-President, J H Fructnight, Secretary, Charles H Avery, Treasurer, J S Warren——The monthly meeting of the Ramsey County, Minn, Medical Society was held in St Paul November 25

Congress of American Physicians and Surgeons —At a meeting of the Executive Committee of the Congress of American Physicians and Surgeons, held in New York City November 23, the following officers were elected

President of the Congress, Dr Wm H Welch, Baltimore, Md, Secretary of the Congress, Dr Wm H Carmalt, New Haven, Conn, Treasurer of the Congress, Dr Newton M Shaffer, New York City, Chairman of the Executive Committee, Dr Landon Carter Gray, New York City, Secretary of the Executive Committee, Dr Wm K Simpson, New York City

The next Congress will meet at Washington, D C, in May, 1897

Hospital Notes

St Luke's Hospital, New York —The thirty-seventh annual report of this institution has been published, covering the twelve months ending St Luke's Day, Oct 18, 1895 The volume of 110 pages is largely devoted to the medical and surgical service tables The report shows that the new hospital is so far advanced that, within a few months, the buildings will be ready for occupancy The work of the training school for nurses has gone on steadily, notwithstanding the fact that the service within the hospital has been cut down one half The Board of Managers have in view the amplification of the pathological work of their plant by the construction of a building, for the endowment of which the sum of $200,000 is to be raised The approximate per diem cost was $1 61 for each ward patient, while the price charged paying patients has been only $7 00 per week

The Newport, R I, Hospital —Mrs F W Vanderbilt has added $5,000 to her previous contribution for the new operating building attached to the Newport Hospital, which makes her gifts for this purpose $8,000 in all, and practically pays in full for this building

Presbyterian Hospital Benefit —The managers of the Presbyterian Hospital of Chicago have reason to congratulate themselves on the concert given at the Auditorium on the evening of December 2 The Theodore Thomas Orchestra, the divine Melba, and the magnificent Scalchi, made up an entertainment which will long be remembered in the medical history of Chicago The vast Auditorium was crowded and the box office turned in a very handsome revenue to the support of the hospital

The Medical Staff of the Erie County Hospital, at Buffalo, N Y, has submitted its second annual report to the superiors The report shows that during the year from Oct 1, 1894, until Sept 30, 1895, the members of the staff made 1,335 visits to the hospital and 2,452 patients were treated——The Sisters of the Poor of St Francis, having charge of St Mary's Hospital at Hoboken, N J, will build a large addition on the south side of the hospital in order to meet the demands for more accommodations

Detroit Notes

Dr Hedley Williamson read a paper on "Smallpox" before the Detroit Medical and Library Association at their meeting of Nov 25 This society has issued a monthly card giving the names of the authors and the title of their papers for each Monday evening of December, and it is the most complete card that the society has issued for some time, the last day, December 30 being assigned to George Henry Fox, M D, of New York

Deaconess Hospital —At a meeting of the staff of the Deaconess Hospital the following officers were elected, and the different positions assigned as noted Staff of Deaconess Hospital President, E B Smith, M D, Vice-President, G A Kirker, M D, Secretary, J F McPherson, M D, Consulting Surgeons, D Maclean, M D, H O Walker, M D, A W Ferguson, M D, of Chicago, Attending Surgeon and Operative Gynecologist, E B Smith, M D, Consulting Physicians, P Klein, M D, G A Kirker, MD, C Brumme, M D, Attending Physicians, L C Newton, M D, T M Lawton, M D, Consulting Oculist and Aurist, C E Frothingham, M D, Attending Oculist and Aurist, L E Maire, M D, Gynecologist and Obstetrician, J F McPherson, M D, Consulting

Gynecologists and Obstetricians, C H Leonard M D, N W Webber, M D, E W Jenks, M D, Consulting Neurologist, J E Emerson, M D, Attending Neurologist, T J Parker, M D, Physician for Throat, Nose and Chest M McColl, M D, Assistant Physician, J H Greenwood, M D, Physician for Children's Diseases J F Bennett M D E W Tonkin, M D, Bacteriologist and Pathologist Board of Directors, Officers of the Staff ex officio, L L Maire M D, T J Parker M D

Health Office report for week ending Nov 29, 1895 Deaths, under 5 years, 32 total, 87 Births, male, 45, female 50, total, 95 Contagious diseases diphtheria, last report, 34 new cases, 29, recovered 17, died 8, now sick 38 Scarlet Fever Last report, 15, new cases 8, recovered 4, died none, now sick 19 Smallpox Last report 2 new cases none, recovered none, died none, now sick 2, 1 from Hamtramack and 1 from Detroit

St Louis Notes

Weekly Report of Health Officer —Total number of deaths during the week ending November 30, 170, during the preceeding week, 160, during the corresponding period of last year, 158 Births reported, 211 Contagious diseases reported during the week ending November 30 Diphtheria, 115 cases, 18 deaths, croup, 16 cases, 8 deaths, scarlatina, 8 cases, measles, 8 cases

The St Louis Medical Society —At the regular meeting Saturday evening, November 30, the scientific program consisted of a paper by Dr Warren B Outten on "Hematomyelia" with an extended discussion by neurologists and surgeons The paper was an elaborate examination of the subject based upon a collection of opinions expressed by leading neurological authorities in literature, and upon the personal experience of the leading neurologists of America The deduction made was to the effect that primary and isolated hemorrhage into the substance of the spinal cord does not occur as a result of trauma, that cases where hemorrhage of that character are found are to be explained as the secondary complication of an antecedent change in the cord, rather than as the direct result of injury The paper was a valuable one for the fact that it clearly demonstrated the uncertainty that prevails among observers with regard to the pathology, diagnosis, and prognosis of hematomyelia as an isolated condition Whether the conclusion drawn is warranted is questionable Certainly, as was pointed out in the discussion, the demonstration of one case of isolated primary hematomyelia by careful post-mortem would at once decide the question of the occurrence of it, no matter what past experience had been It does not decide the question of possibility in such a matter as this to cite opinion or even past experience, the most such a reviewer can do is to emphasize the improbability of hematomyelia being the lesion in a given case of trauma open only to clinical observation

Smallpox is reported from Charleston, Mo, where four cases have occurred

The Hospital Saturday and Sunday Association —Returns are not yet in covering the collections for November 30 and December 1, but the partial reports show a gratifying prospect In 1894 the contributions amounted to $9,992 17, which was distributed among nine hospitals in sums proportioned to the number of free patients treated during the year

Louisville Notes

Louisville Medical College —The class of 1896 of the Louisville Medical College elected its officers at a meeting held in the college building last week Sixty seven members were present The following were elected President, E R Morris, North Carolina, Vice-President, J W Benham, Indiana, Secretary, O K Harris, Indiana, Treasurer, R E Egan, West Virginia, Salutatorian, J C Lawrence, Virginia, Valedictorian, E B Hardin, Kentucky The valedictorian was the only Kentuckian on the list He is a relative of P W Hardin, the recent democratic candidate for governor

Insane Asylums—Dr J H Letcher, of Henderson, a prominent Republican, is mentioned as the choice of Governor-elect Bradley for Superintendent of the Hopkinsville Asylum, and Dr L N Baughman, of Flat Lick, for Superintendent of the Eastern Asylum at Lexington Dr Baughman has held public office before, having been pension examiner under the last Republican president

Health Ordinance —At the last meeting of the General Council the Board of Public Safety presented the ordinance prepared by Dr White looking to the prevention of diphtheria scarlet fever and smallpox For some weeks several public spirited ladies have been submitting cards to the local papers, crying out for compulsory immunization of all children attending the city schools from diphtheria, and they were answered by a letter to the editor of the *Times*, calling attention to the great importance of obtaining the passage of the contagious disease ordinance Since then the ordinance has been submitted as above reported, and it is to be hoped that the Health Committee will be importuned by every public spirited person to recommend its passage, and the Council to vote favorably upon it The Mayor's signature will be affixed if it is passed

Death Rate —The report of the health officer for November, 1895, shows a less number of deaths than in the corresponding month last year In November, 1894, there were 256 deaths, and in the month just past 249 During the month consumption caused 17 deaths, diphtheria, 14, typhoid fever, 11, cerebral meningitis, 11, old age, 10, pneumonia, 29, there were 17 still births One hundred and thirty-three females and 130 males were born in Louisville Annual death rate per 1,000, 16, white—168,547 population—death rate, 14, colored—36,453 population—death rate, 22, for the month, white, 1 4, for the month, colored, 1 4 There were 66 deaths during the last week in November

Cincinnati Notes

The Mortality report for the week ending November 29, shows the following Diphtheria 5, entero-colitis 2, scarlet fever 1 typhoid fever 3, whooping cough 1, other zymotic diseases 5, cancer 3, phthisis pulmonitis 7, other constitutional diseases 2, apoplexy, 2 Bright's disease 2, bronchitis 7, gastritis 2, heart disease 5, meningitis 3, peritonitis 3, pneumonia 12, other local diseases 29, developmental diseases 8 violence 3, under 5 years, 26, total 104 Annual rate per 1,000, 16 09, preceding week 98 Corresponding week in 1894 112

Dr Wm Osler, of Baltimore, delivered an address before the Academy of Medicine November 19, taking for his subject "Higher Medical Education" Dr Osler made a strong plea for more general interest on the part of the public and especially in the establishment of college laboratories, to which he thought the wealthy men could not make a better disposition of their money than by endowing them—this in view of the great work they are doing for humanity's sake Dr Osler was entertained by Col Chas W Wooley

The Home for Incurables has just received an endowment of $1,000 from the estate of David Eckstein, which was left to a charity to be named by the Mayor

The Ohio Wesleyan University has received a gift of $50,000 from Dr Chas E Slocum, of Defiance, Ohio for the purpose of enabling the institution to erect a fire-proof library building

The arrangements are about completed whereby the University of Cincinnati will have a completely equipped medical department

At the meeting of the Academy of Medicine held December 2, Dr E Gustav Zinke contributed a paper on "The Management of Occipito-Posterior Position" It was discussed by Drs W H Taylor and Giles Mitchell

There is less typhoid fever at present than for a number of years, although the Ohio river, which is the water supply shows but two feet and four inches

Dr F W Hendley the Superintendent of the Cincinnati Hospital, has been promoted to the position of Major and Surgeon of the First Regiment of Infantry made vacant by the resignation of Dr L C Carr

Dr J E Lowes, of Dayton, has been appointed Surgeon-General of Ohio by Governor Bushnell

A new medical society has been organized in the Medical College of Ohio and named for Prof P S Conner, the eminent surgeon Dr Parley Phillips has been elected president

Two cases of favus were discovered in the Children's Home last week They were sent to the hospital

The quarantine on the Children's Home has been raised

The Laura Memorial College, which was recently furnished and presented by Alexander McDonald as a memorial to his daughter, opens with a class of forty and promises to soon become recognized among the front rank of the medical colleges for women in this country

Mrs Jane A Gibson has made a second endowment of $5,000 to Christ's Hospital

The *Tribune* has just presented a handsome buggy as a prize for the physician receiving the highest number of votes Dr S J D Meade, a 'homeopathic" practitioner was the winner, he having obtained 33,000

A case of dislocation of the fibia and tibia, forward on the femur, was admitted at the City Hospital last week as a result of a boiler explosion on a steamboat, this is the first case of this character appearing on the records

Dr W H Dougherty, of Corinth, Ky, was thrown from his buggy on the 25th of last month and sustained severe injuries

The public and Sunday schools of Zanesville, Ohio, have been ordered closed as the result of an outbreak of forty-five cases of scarlet fever

An epidemic of typhoid fever is prevailing at Randolph, Ohio, which is claimed to be due to an abandoned cemetery in which vicinity all the cases have occurred

A discussion of the humanity of vivisection by a number of the profession of Cincinnati has recently been published by the *Commercial Gazette*

Washington Notes

Weekly Report of the Health Office—The report of the Health Officer for the week ended November 23 is as follows Number of deaths (still-births not included) white, 58, colored, 35, total, 93 Death rate per 1 000 per annum, white, 16 1, colored, 20 7, total, 17 5 Death rate per 1,000 per annum for corresponding week last year, 16 8 The reports of deaths to the Health Department during the past week show a continued improvement of the general health of the city From 99 deaths reported week before last the number decreased to 93, a decline equal to 6 per cent Accordingly the annual death rate fell from 18 68 to 17 55 for the whole population The mortality from typhoid fever was 4, as against 7 in the week previous This malady is evidently on the decline During the first week of November the deaths reported therefrom numbered 17 since which time they have fallen respectively each week to 8, then 7, and now 4 The dangerous contagious diseases present no epidemic form, there having been but 1 death from diphtheria and 2 from scarlet fever The week's health history shows the decided fall in infant mortality from 35 of those under 5 years old to 18 The fatalities from chronic and acute lung troubles stand this week at about the normal, while taking whole list of diseases in view, the general condition of the public health is satisfactory

Pedestal for Dr Gross' Statue—Col Wilson, of the engineer corps, in charge of public buildings and grounds, is now engaged in the execution of a work placed in his care by a special act of Congress It is the construction of a granite pedestal for the bronze statue of Dr Samuel D Gross, which is to be erected at a prominent point in the Smithsonian Park, between the National Museum and the Army Medical Museum The pedestal will be of simple and impressive design Upon one of the faces of the die will be carved a partial leaf of palm and laurel, within which will be in raised letters the name, "Samuel D Gross," and under it in incised letters the following words "American physicians have erected this statue to commemorate the great deeds of a man who made such an impress upon American surgery that it has served to dignify American medicine" The statue is now being made abroad upon a design of a foreign artist

Medical Society of the District—At the regular weekly meeting of the society, held on the 27th inst, Dr N Jacobi, of New York, read a paper on "Nephritis in the Newly Born" Upon its conclusion the society honored him with a vote of thanks Dr Bovee presented two specimens of fibrinous uterus, removed by abdominal section Dr Stone presented a specimen of appendicitis A committee of three, consisting of Drs C H A Klinschmidt, F C Smith and Geo L Magruder, presented resolutions of regret on the death of Dr Geo C Merriam

The Secretary and Department of Public Health—At a special meeting of the District Medical Association, held on the 30th inst, the subject of a Department of Public Health, with a medical man as Secretary and member of the Cabinet, was fully discussed The matter came before the association formally by a letter from Dr Jerome Cochran, chairman of the committee on this project, appointed by the American Medical Association The President's message to the Fifty-third Congress advocating such a department, and Senator Gray's bill for its establishment, were read before the physicians present It was voted to favor the measure, and to choose a committee to coöperate with Dr Cochran in urging the passage of an organic law by the present Congress The committee named consists of Dr H L E Johnson, Dr Samuel C Busey, Dr W W Johnston, Dr J R Wellington, and Dr C H A Kleinschmidt

Committee of Board of Trade on Public Health—Mr S W Woodward, President of the Washington Board of Trade, has appointed the following named medical men on the Committee on Public Health Drs Samuel C Busey, W W Johnston and H L E Johnson

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S Army, from November 23 1895, to November 29 1895

Major George W Adair, Surgeon (Washington Bks, D C), is hereby granted leave of absence, for one month, to take effect about Dec 4 1895

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending November 30, 1895

Surgeon F Anderson, detached from the "Amphitrite," and ordered to the "Dolphin"

Surgeon P M Rixey, detached from the "Dolphin," and placed on waiting orders

Surgeon J E Gardner, detached from Port Royal Station, and ordered to the "Amphitrite"

P A Surgeon I W Kite detached from the Franklin," and ordered to the naval hospital, New York

P A Surgeon T A Berryhill, detached from the naval hospital, New York, and ordered to the Port Royal Naval Station

Change of Address

Brooks S D from Chicago, Ill, to Marine Hospital St Louis, Mo

Cobb W F, from Mona Iowa, to Lyle Minn

Fowler W S, from 59th St and Washington Av to 4142 Berkley Av, Chicago, Ill

Kaull, W M, from Tiffin to Mexico, Ohio

McLain John S, from 1624 N St N W to 1820 10th St N W, Washington, D C

Perry, T B from Fortress Monroe, Va, to Milledgeville, Ga.

Small, A R, from 8300 State St to 3180 Indiana Av Chicago, Ill

LETTERS RECEIVED

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Battle & Co St Louis, Mo Barker, Mrs A, Charleston, Mo Beck Carl, New York City Beman's General Newspaper Agency Ann Arbor, Mich Boehinger, C F, & Soehne, New York, N Y, Blodgett F J, New York, N Y

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Goode, Thos F, Boydton, Va

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Thorner, Max, Cincinnati, Ohio, Tulkerson, W D, Coffeyburg Mo

Wallau, Geo W, New York, N Y Williams, J F, Chicago, Ill Wilson, Louis N, Worcester, Mass

The Journal of the
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Vol XXV CHICAGO, DECEMBER 14, 1895 No 24

ORIGINAL ARTICLES

ON THE RELATION OF SEX TO THE PROGNOSIS OF EPILEPSY

Read in the Section on Neurology and Medical Jurisprudence, at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY WILLIAM BROWNING, M D
BROOKLYN N Y

The purpose of this paper is briefly to call attention to a difference in the sexes as regards chances of recovery from the convulsive habit This is a matter that has not been absolutely overlooked, though it seems to have received scant attention Only in Gowers have I so far found any original reference to it, and he simply says that, "the prospect of arrest is slightly better in males than in females"

It is unusual for sex to play a very important rôle in those diseases that are common to both male and female Among epileptics there is no great preponderence of one sex over the other In my former statistics (to July, 1891)[1] of this disorder there were 84 M to 66 F Reynolds found 102 M to 70 F, but says that "practically, the two sexes appear to be about equally affected" Some later statistics indicate a slight excess of females, but this is disputed And it should not be overlooked that males are more exposed than the opposite sex to accidents provocative of epilepsy At any rate in my own series the numbers of the two sexes have not varied sufficiently to account for any considerable difference in results At most this has but a relative bearing on the subject in question

It is of course true, that a great majority of epileptics are but little amenable to treatment Nevertheless this does not hold for selected cases If the trouble occurs in a young male (youth or early manhood) and is taken promptly in hand, and if the case does not show organic lesion or too many marks of degeneracy and can be followed up, there is in my experience, a considerable, perhaps an even chance of cure—taking this term in the sense of cessation of seizures for years at least after conclusion of treatment[2]

In other and less favorable cases in males, there is correspondingly less hope of cure, though it is now and then possible The relief of weak heart, ear troubles, gout, the expulsion of tape worms, etc, and sometimes more direct medication will give an occasional cure

If, now, we compare with this showing in males, the results obtained in females, we find, in my experience, one long line of failures In dispensary practice there has hardly been an exception to this[3] True, we can give some relief and occasionally think we are to effect a cure In some cases of digestive or cardiac disturbance, that have been attended by one or two seizures, evidently but symptomatic in nature, we may even see a complete cessation And the like may hold for an occasional case of so-called reflex origin But in any case in the female that could certainly be classed as epilepsy there has been no cure, and only now and then any material amelioration In private practice, the results have been but little better—the longest free period in any female patient has extended but one year

Therapeutically, not only has the same plan been tried as in the males, but also various modifications of it with the hope of better suiting the female

The same fact appears casually in the paper to be presented here by my colleague, Dr Barber He soon had to give up his trial of *solanum carolinense* in the case of females, because of its entire failure, while in the boys there has been sufficient benefit to enable him to continue observation

In view of these facts, the unsatisfactory outcome can hardly be attributed to a poor adaptation of treatment In seeking an explanation I have come across a few things having apparently some bearing thereon, though even if related or parallel matters they serve quite as much to verify as to explain

In the first place it may be recalled that any intoxication habit (for alcoholics, narcotics, or what not) is less tractable in women than in men It is, alas, little enough so in either Under institutional care this may not be apparent, but in private cases one soon has to recognize this fact

Again, my service at the Kings County Hospital includes a department of some fifty feeble-minded and idiotic children Last year a party of noble women in Brooklyn started a school for the instruction of these incapables There it was soon apparent that though the sexes were almost equally represented in the whole number of inmates of that department (twenty-six males to twenty females), the number of girls capable of any real instruction was usually about half that of the boys (thirteen males to six females at this writing) This was the more surprising, as in other mixed schools the girls are pretty uniformly found to be on an average brighter, more studious and conscientious than the boys But inquiry elicits the information that generally in schools for the mentally defective, the boys are found brighter as scholars and more amenable to training than the girls

The very kind reply of my friend, Dr M W Barr, Chief of the Pennsylvania Training School for Feeble-Minded Children at Elwyn, is well worth giving

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[1] The Epileptic Interval etc New York, 1893

[2] In a continuous series of thirty four cases all males ranging in age from 11 to 25 years, nine were seen but once, and *hence must be* deducted. In the remaining twenty five many of the above specified conditions were not adequately filled, and yet they gave a record of six definite and five more presumptive cures

[3] In a continuous series of thirty four females covering the same period as the above series of males and with like range in ages twelve were seen but once thus leaving twenty two Among these there was but one in which there was any question of cure and even this was too uncertain to be so classed

"We find that the mental improvement is more marked in the boys than in the girls—the ratio of 3 to 2

'The physical improvement is about equal in both sexes We find that the mental condition does not always depend on the physical, nor the physical on the mental

"I do not know any explanation of this, or why the boys are more improvable than the girls, except that the girls are more nervous and less willing to do good honest work than the boys"

These matters seem to have a direct bearing, however difficult it may be to analyze closely, on the main point raised Perhaps there is some additional force in the fact that a portion of the imbecile class are also epileptics It would be interesting to know the school ratio, so to speak, of the mental cripples that are free from epilepsy

On the other hand, a comparison of the gross statistics of recovery in the insane, fails to discover any particular difference in the sexes Barring the excess of male paretics over female, the chances of recovery are about equal in the two, if we take all forms together (shown by adding up some 15,000 cases from recent asylum reports)

Any attempt to interpret these matters is little more than speculation It is, however, important to find the true explanation in the case of the epileptic, as on it must depend our treatment to be successful

(*a*) The suggestion of a "greater strain placed upon females at the age of puberty" (Hare), hardly calls for serious consideration If such an element exists it must tend rather to produce an excess of epileptics in that sex than to any essential difference in the resulting disease itself

(*b*) The influence of a possible hysterical factor is better worth attention I must acknowledge that it has often proved a difficult question to decide on its existence or not in female epileptics At one visit a case will appear a pure epilesy, and at another the hysterical features will be just as clear This is a separate matter from hystero epilepsy, although where the latter in the female proves to be more than transitory, definite epileptic symptoms soon begin to color the case

With males, on the contrary, my experience is uniformly to the effect that epilepsy and hysterical epilepsy are well separated, *i e*, a given case is wholly one or the other

But the persistent factor in female epilepsy has never been influenced by a regard, therapeutically, to a possible hysterical side, though this is only negative and weak evidence

(*c*) The power of habit in the female That this is greater than in the male may be granted But, even if this applies to acts beyond the influence of the will, it can hardly account for the lesser mental receptivity of the weak-minded female, though this latter may be an entirely separate affair

(*d*) Finally, it is possible that failure of treatment in the female epileptics depends on some inherent fundamental condition and that we can never expect to make it as successful as in males

The results of operative treatment have not been considered in this paper, partly because that applies to a special class of cases and partly because there would be too few females for a proper comparison, as well as the great uncertainty in most of the results reported

So far, we can at least recognize that, while there is a fair chance of cure in the most favorable male cases, we must expect little in the female—and remember it in prognosis

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A CLINICAL NOTE ON THE TREATMENT OF EPILEPSY BEFORE THE HABIT IS FORMED

Read in the Section on Neurology and Medical Jurisprudence, at the Forty sixth Annual Meeting of the American Medical Association at Baltimore, Md May 7-10 1895

BY E D FERGUSON, M D

TROY N Y

Though many links in the chain which would represent the complete pathology of epilepsy are lacking, enough is known to furnish occasionally a clew to rational treatment, and whether our measures may be addressed to some etiologic factor or be symptomatic as the administration of the bromids for the control or diminution of the attacks, it seems fairly evident that in the majority of instances the longer and more frequently the seizures have been occurring the greater will be the difficulty in abolishing them or diminishing their frequency

In a general way, the influence of long continued recurrence is recognized under the name of habit, and is no doubt to be accorded some importance, for it will scarcely be necessary to adduce illustrations of the influence of habit on many of the functions of the body

Undoubtedly, in the treatment of epilepsy, more brilliant results will obtain in those cases in which the cause is ascertainable and of such a nature and so situated that it can be efficiently treated, and in particular will we be entitled to expect a successful result if the case comes under observation while still showing only the minor forms of its manifestations, but even when we are unable to direct our measures from an etiologic standpoint, and must rely upon the ordinary routine means, if the treatment be thorough and energetic, begun at an early date and continued for a long period, we may cure some cases that would prove incurable if subjected to treatment at a later date This applies to the cases subjected to any therapeutic plan, whether surgical (at any point from the vertex to the soles of the feet) or medicinal, as the usual course of the bromids In these cured cases, however, there is occasionally a lingering doubt that those presenting only the minor manifestations might fail to develop into *le haut mal*, but no one can doubt that a proportion still remains in which if *le petit mal* be relieved the patient is saved from the greater events of the disease

By way of illustration, I will cite two instances of the minor form, presumably of reflex origin, and associated with that somewhat overworked source of irritation, phimosis

The first case, a boy about 6 years of age, had for several months been noticed to act peculiarly during urination That fact was reported to me, and I requested the parents to note carefully the events occurring at that time, the report embraced the statement that he would defer the act as long as was practicable, and then, when about to accomplish it, would seem agitated as by fear, his face would become pale, he would start backward a step or two, his body would become rigid, and there appeared to be a momentary unconsciousness, but as the urine began to escape these symptoms would diminish so that at the completion of the act, or a few moments thereafter, he would be ready to resume his play or studies

It was some time before I saw the child for exammation, for in response to my inquiry as to the condition of the prepuce, by a mistake I was told that it had been examined and pronounced in a normal condition, but the symptoms becoming more pronounced and the evidence of a brief loss of consciousness becoming stronger, I insisted on seeing the child, and an examination showed a phimosis with a pinhole orifice, and at the incision I found the prepuce strongly adherent to the glands over quite a portion of the surface For two or three weeks after the incision the symptoms continued, but in a gradually diminishing degree, the diminution apparently keeping pace with an increasing confidence that the old sensations had been removed, and finally the trouble definitively ceased without the administration of drugs

The other case was that of a lad, 10 years of age, who had shown no trouble prior to seven months of age, aside from measles when five months old The first signs consisted of slight convulsive seizures, consisting mainly of rigidity of the muscles of the trunk and oscillation of the eyes, though at eight months there was some paræsis of the right side which persisted for quite a period For about eight years the attacks recurred on the average from three to six times daily, were brief in duration and were not followed by somnolence, but the frequency would be increased during the continuance of intercurrent illness During the following two years the attacks did not notably increase in frequency, but they became somewhat more severe and were followed by a stupid or drowsy state The father consulted me concerning him in an incidental way, and I advised that he should have him examined, particularly in reference to natal or post-natal injury to the head and the condition of the genital apparatus, for he described the act of urination as difficult and spasmodic In the meantime I advised the use of bromids to try and control the habit element As he lived a long distance from me, I heard nothing from the case for some months, when, being in the neighborhood of his home on another case, I again was consulted, and found a well developed boy of 10, apparently in good health in every way except the convulsive seizures, and some slight defect in the motility of the right side, presumably due to a mild attack of polio myelitis in his early infancy There were defective educational development and somewhat peculiar manners, both of which were doubtless in a measure the result of his having been kept from other children and from school

The bromids had stopped the convulsions for nearly six months, but they had begun to recur A tight and adherent prepuce furnished one ground for interference and I advised that the phimosis be removed, which was done somewhat later, and thereby he was relieved of his urinary trouble,[1] but after a time the convulsions recurred, and he will probably become a confirmed epileptic, though I am convinced that an early operation and efficient medical treatment, particularly if instituted before the epileptic habit had been formed, would have resulted in a cure

Another case of reflex influence interested me very much It occurred in the practice of a medical friend, early in my professional work and before the use of the bromids had become so common The patient, a man, had had several epileptic attacks, when, during an examination of his body for general diagnostic purposes, and while manipulating one foot a paroxysm occurred The same event having been repeated at another and not remote occasion, a more critical examination disclosed a small subcutaneous tumor on the dorsum of the foot, and pressure thereon produced a more or less complete epileptic attack Excision of this growth resulted in a definite recovery

Another instance will serve to illustrate the importance of thorough measures in the early stages of the disease A young woman consulted me on account of a single convulsive seizure which had occurred a day or two before Though realizing fully the fact that a single attack had slight diagnostic value, the description of the fit, as witnessed by a friend, led me to suspect so strongly that it was epileptic that I at once placed her on a bromid treatment with directions to make certain increase in the dose in case of a recurrence In a short time she had another attack and then another, so that she had several within a few weeks After each fit the dose of bromid was increased, until finally the intervals increased, and after about three months she had the last attack The dose of bromid of potash had then reached a little more than 2 drachms daily and was continued at that amount for upward of two years, and then gradually diminished, so that it was stopped at about four years from the commencement of the treatment This case, like the majority of cases of epilepsy, furnished no evidence as to causation or pathology and was treated entirely on an empirical basis If the attacks had been allowed to continue for quite a time it is fair to assume that the condition would have become more difficult of control and probably incurable

I am fully aware that this note contains nothing new, but it has seemed clear to me that the utility of energetic measures in the early stages of the disease has not been adequately urged or appreciated, and it is then, if at all, that we may hope to eliminate one factor, a minor one though it be, in the continuation of the disease, i e , the element of habit

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THE LIMITATIONS OF SURGICAL OPERATIONS AS A MEANS OF RELIEF OR CURE IN EPILEPSY

Read in the Section on Neurology and Medical Jurisprudence at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY THOMAS H MANLEY, M D
NEW YORK

During the past two decades, or the last quarter of the nineteenth century, a vast change has been wrought in the principles governing surgical operations, the use of the microscope has sapped the very foundations of pathology which was taught as late as the early 70's, and in that short space of time, we have witnessed the birth and death of many theories which were advanced with the force of dogmatic emphasis

In short, our age is one of theories and it would seem that in spite of the scientific foundation which modern medicine is supposed to rest on, our position is anything but fixed and definite, and, never, probably at any time, was the profession more eager to test the efficacy of any therapeutic agency, provided only that its source was from those recognized as authorities Our bent is essentially materialistic, and we are endeavoring to wring from nature her mysteries and her secrets by experimentation and biologic research, rather than on the old beaten track of clinical observation Surgery has made vast inroads on the domain of the physician Not content with the slow uncertain action of medicines, by an internal route, we now take time by the forelock and scarcely any recess of the body is beyond the exploratory advances of modern surgery

The same cavities which our forefathers never penetrated, except with fear and hesitation, have lately been ruthlessly invaded, and we have been led to hope that the time had come when many of the maladies heretofore quite incurable were now capable of prompt and certain eradication

Truth and justice, however, compel us to avow that, except with the cavity of the peritoneum, it remains an open question, whether or not aggressive surgery has any well founded claim in the way of securing better results than may be attained by constitutional or symptomatic treatment

With pulmonary diseases, surgery can do little, except in draining for empyema And in this, of all the cavities, physics has brought the art of diagnosis practically to perfection Since the doctrine of cerebral localization has been promulgated, Ferrier, Broca, Victor Horsley, McEwen and others have made the brain and its surgery a special study, the cranial cavity has been opened and explored in the treatment of many traumatic and pathologic conditions which, formerly, were regarded as quite beyond operative relief

From what had been achieved by the security against inflammation or septic infection which antiseptics afforded, the precision derived by cranial topography and accurate cerebral localization, together with such osteoplastic operations on the cranial walls as would permit us to again fill in the wide breach made through them, it was believed that the time had come when we might succeed in locating and removing safely, neoplastic formations, or such other pathologic conditions as give rise to or perpetuate many of those maladies which appear to be of central origin

It was earnestly hoped that at last a way had been opened by which we might offer some prospects of cure of that dreadful affliction designated epilepsy, that if it were dependent on cranial contraction, expansion and free play of the cerebral mass might be promised through a simple division of the cranial walls, if there were hard osseous compression, it would be easily relieved by the trephine, if there were new growths or adventitious formations, that their extirpation might be safely accomplished

How far our anticipations have been realized in this direction, what positive substantial progress has been made, it is interesting and necessary that we now determine, in order that we may be able to make a reasonably definite forecast of the results following these cranial operations which are undertaken to relieve a case of epilepsy, whether their scope should be enlarged, or, on the contrary, restricted to only very rare and exceptional instances in which the physical distress is so great that any description of interference, not too hazardous to life is justifiable when indications point, even though remotely, to the probable seat of trouble

Before we undertake the treatment of any disease on a scientific basis, it is indispensable that we have a correct understanding of those pathologic conditions of the elements of the structures or organs through which it finds expression Though, even when such a consummation is attainable and science has pointed unmistakably to definite etiologic factors, it has, so far, been singularly impotent in all but a very few instances to proceed any farther and indicate specific remedies Thus we will observe that though physics has enabled us to easily recognize and follow every stage of pneumonia, its mortality remains as great or even greater than when symptoms alone were treated Nor has the discovery of the microbe of phthisis suggested its antidote Our microscopic differentiation of the cell elements of malignant growths has in no manner enabled us to the more effectively abort their progress or, after their advance has begun, do more than treat them on general principles

But with epilepsy, anything like a definite pathology is wholly wanting There are good reasons for believing that though its manifestations are through explosions of nerve force, by way of the encephalon, there are other subtle influences in operation, possibly in the blood of some one of the eliminating organs While the cause of the malady remains in such profound obscurity, how is it possible to direct effective measures for its control or cure? And this view of the question is borne out by the fact that in our time nearly every large city is provided with special hospitals or asylums for the management of many of these hopeless cases

But there are quite a few of the focal or Jacksonian type, which seem to date their origin to an injury of the skull Perhaps a blow or a fall, which produced evident cerebral concussion, or a fracture with depression of bone In one case which came under my care there was a marked depression of the left glabella of the frontal bone, produced by compression of the obstetric forceps at the time of birth

For this class, aggressive surgery was looked to for relief The depressed bone might be elevated or removed, an organized blood clot pressing on the cortex might be displaced, a new growth enucleated, or adhesions between the meninges and brain substance liberated

Intra cranial surgery was soon greatly enlarged, and this offered a fertile field for radical methods Treatises have been written on it and monographs in great number have been widely circulated, setting forth the claims for this new departure Progress, however, had not made very great advance before circumstances arose that led to a pause, and then reaction set in, until now we have reached a middle ground, with a tendency rather in the direction of a salutary conservatism, than ill-timed indiscriminate operating

It was found that the operation of *trephining* itself was attended with many serious dangers to life from hemorrhage, meningitis and cerebral hernia, and what was most discouraging, after varying intervals of time, the convulsions almost invariably returned

In some few cases the epileptic attacks were not so frequent nor violent after operation as before True permanent cures have been reported, but no such result has ever come under my observation, either from the hands of others or in my own practice It is not impossible nevertheless, to find an occasional cure succeeding operation in a certain class of cases A great fright has been known to produce epilepsy as well as a severe physical accident, and, singular to say, the same agencies have been known to promptly cure it Some years ago a little girl was under my care for the treatment of a fractured arm, resulting from a fall over a rocking-horse, and though a victim of the most violent form of epilepsy before the accident, she has never had a seizure since, many have experienced a vast improvement by hypnotism, the faith cure and clairvoyant treatment It is, therefore, reasonable to inquire what role psychic influence plays in these cases which been operated on, the anticipation, dread and fear of the ordeal, the effects of the traumatism on the tissues, the loss of blood, or the effects of the anesthetics?

If we were only assured that any type depended in certain cases on localized compression, as depressed bone, or tumor pressure alone, then we might hope for enough benefit ensuing to warrant us in undertaking an operation for its removal But those who have opportunities to examine many traumatisms of the skull, know well that in many who have well-marked bone depression, epilepsy is never witnessed It is a well known clinical fact too, that moderate cerebral compression is entirely compatible with the healthy functions of the brain Extensive intracranial compression may produce pain, paralysis or coma, but that it in itself is ever a sole and direct cause of epilepsy is decidedly doubtful

In more than seven hundred fractured skulls, beside other serious traumatisms of the brain which have come directly under my care during the past fifteen years, I have found no direct evidences that a moderate indentification of its plates or intracranial pressure from effusion ever *per se* was the cause of epilepsy in any one who before the injury did not give a history of having had it at some earlier stage of life

With those who have an inherited or an acquired tendency to this disease, a cerebral injury undoubtedly often serves as a direct determining cause of its manifestations, and, with this class, we may, perhaps, expect the most satisfactory results from an operation on the brain when we have reasons to suspect pressure

On a comparatively superficial examination of the surgical literature of the past ten years, one is quite amazed at the vast number of cases of epilepsy that have been treated surgically during that period This is notably true of the Jacksonian and traumatic types Few surgeons could resist the seductive promises held out by modern investigators, with the apparent precision in cerebral localization and no serious peril to the patient Current medical publications, in both Europe and America, contain almost an infinite number of cases dealt with by radical measures yet, withal, it does not appear that any author has prepared a statistical table setting forth in detail the ultimate results It is obvious that such an undertaking, though highly valuable, would be quite impossible, for the reason that in a very considerable number the reports of several are so incomplete and indefinite as to be practically of no value Certain authors speak of "recoveries" after operations when it is not clear whether they refer to operative success or cure of the disease Very many are set down as 'recoveries" when the time that the patients were in hospitals was too brief, or they were too soon lost sight of

But very few have noted the influence of hereditary taint, sex, physiologic conditions, or antecedent history Enough, however, has been gathered to lead us to the conclusion 1, that trephining the skull is in itself, except in the hands of skillful surgeons, an operation which may endanger life, and 2, that, with only occasional exceptions, it makes no permanent impress on the course of the disease Gowers ("Diseases of the Nervous System," vol II, p 314) believed that "blows and falls on the head which cause symptoms of cerebral injury are sometimes followed by recurrent convulsions of an epileptoid character, leaving an impaired vitality of delicately constituted cells, the convulsions being local, owing to a local damage of the cerebral cortex" This view is difficult to harmonize with oft repeated clinical observations, and if rational does not explain how we may look for relief through tapping the skull

Gray says, that these cases of a peripheral origin usually improve under treatment, though a convulsive tendency clings to them ("Diseases of the Nervous System," p 375) This distinguished writer adds, that "trephining is a harmless procedure, under antiseptic precautions" The same writer tells us that some may enjoy an immunity from an attack from ten to fifteen years, and others a shorter time What we are desirous of correctly appreciating after a traumatism borne by the skull, and followed by epilepsy, is precisely the effect of this *alone* as an etiologic factor Before we can conclusively settle this important question, we must eliminate all extraneous influences, those already stated, beside the reflex neuroses, such as have been reported by various authors, a few of which may be enumerated St. Vilbis, in three severe cases of nasal catarrh, saw severe attacks of epilepsy which quickly ceased when this was relieved (*St Louis Medical Journal*, 1888, vol XVI, p 17) Robert saw a man have epileptic fits every time he had a severe attack of pleuritic pain. Another author cured his patient by removing an injured eye, while Bartholow saw cases which he believed were cured by the expulsion of orange seeds in the intestinal canal Le Grand Du Saulle (*Gaz Des Hopitaux*, 1885, LVIII, p 491) reported eight cases of epilepsy caused by viewing the dead body They were all females, from 12 to 28 years old, and in all there were histories of being the progeny of drunken or neurotic parents He accordingly observes that in all these cases there was enough to account for the onset of the malady, independent of fright or shock

In one of my own, the patient gave a history of having borne an injury to the skull in childhood With the aid of Dr M C O'Brian, the neurologist to the Harlem Dispensary service, I was enabled to localize the apparent intracranial mischief, and after removing a disk of bone, came down on a glioma as large as an egg, lying between the arachnoid and cortex, over the fissure of Rolando on the right side This was completely removed and our young man promptly recovered from the operation, but the truce was very brief, for in three months the convulsions returned with their old-time severity Echerexria throws some light probably on the cause of our failure, for he cites quite a similar case, ending mortally after operation, in which, on autopsy, several growths of a similar character were found scattered throughout the brain substance My patient gave a history of trauma in early life (*Arch de Med Gen*, t III, p 533)

From the accumulated testimony of a very large number of surgeons who are not disposed to "color" or report their cases in such ambiguous terms as to leave one in doubt of final results,we can only conclude that the number of cases of epilepsy capable of substantial relief or permanent cure through the resources of surgery is very small indeed We have no evidence that trephining makes any impression on the chronic type of a constitutional origin, those only dependent on local traumatism holding out any definite hope from cranial surgery

The afflicted are loath to admit that they inherit special diseases, and will resort to many subterfuges rather than acknowledge the truth This human frailty is peculiar to no particular class In many of these cases which come to us with scars on their scalps, no doubt, if we instituted a searching inquiry, we would find in some of them, at least, that they were produced by a fall in an epileptic seizure

In the general run of this class we will not find sufficient osseous compression to account for the epileptic seizures Some will say that there was a marked thickening of the plates of the skull where the trephine entered, but how can we determine this, except we are familiar with the relative thickness of the whole skull, which is quite impossible And so may there be patches of thickening of the dura mater or the meninges found, a similar condition often met with within the skulls of those who have died of maladies in no manner connected with the brain

It is certainly doubtful if moderate local depression of bone *per se* will cause epilepsy I have trephined and elevated depressed bone after cranial injuries more than one hundred times, either immediately after injury or within forty-eight hours, and in no single case have I ever seen epileptic convulsions follow, except when meningitis developed In one man an opening was made in the skull to drain a traumatic abscess which contained nearly six ounces of pus, but there were no fits, though we had reason to believe that the fluid compression had lasted more than a week In another man I removed, by *débridement*, several depressed fragments from his skull, which had been injured five years previously The fracture had produced an indentation that would admit the top of the finger and was located immediately over the torcular, which fact probably accounted for non-interference at the time of injury, through fear of hemorrhage He never had any convulsions and only came to us because there was a discharge from the necrosed fragments, which produced spells of irritation and pain in the scalp, which he wished relieved

We are not in a position yet to make any accurate estimate of the range of intracranial surgery in these cases of neoplastic growths, involving or within the cranium, which are presumed to provoke epileptic seizures If we are in possession of such definite data diagnosis as point with certainty to this malignant character, surgery is impotent to offer any relief, except by such perilous exploration as will place life in danger without any commensurate advantage Operative interference for the malignant class may be totally discarded

The myxomatous or gliomatous growths are those most frequently met with in the cortical or gray substance of the brain, and are the species of heterogeneous formations most often encountered in various forms of focal epilepsy They seem to bud from the stroma of the pia mater, usually are of small volume, have very thin walls and lie close to the under surface of the arachnoid Sometimes they are covered at varying depths from the surface by a layer of medullary substance In physical character they closely resemble the gummata of syphilis

Neurologists in many instances, are able to locate them with remarkable certainty, as I have seen demonstrated several times If the therapy of those cerebral affections accompanied with epileptic seizures was as definite as their diagnosis, the problem would be solved, for experience teaches us that, with few exceptions, after the evulsion or enucleation of these pulpy cysts, the tendency to many cerebral disturbances which they provoke continues The cerebral centers are then said to have acquired a habitual derangement, or have undergone such alteration in their elementary structures that operative measures in nearly all cases can only assure a temporary truce

The surgery of certain types of epilepsy to-day occupies a status not altogether unlike that of cancer, *i e*, in various clinical types it holds out no possible prospects of cure or even of relief

Like the dread scourge of epithelial proliferation, in rare isolated instances, after operation, epilepsy may not relapse Indeed, on the whole, it may be said that cancer is the more amenable to treatment, for the charlatan has always a large *clientèle* of those afflicted with this malady, though it is seldom that we see him advertise his "cures" of epilepsy

From the foregoing brief review of the surgery of epilepsy, the inference will probably be that, notwithstanding all that has been written of late years on the great advances of intracranial surgery, its application to those morbid conditions of the brain that gives rise to epilepsy in its various forms is so narrow and limited as to be practically of no avail

It has not been my intention to leave that impression, for it is my conviction that with the onward march of progress, in the near future a way will be opened through scientific reseach, experimentation and improvement in surgical technique, by which many of those afflicted with this disease will be greatly relieved, if not promptly cured Even now there can be no question but in a considerable number of the most aggravated type, though surgery can not promise a permanent arrest of the convulsive seizures, it may very greatly reduce their frequency, relieve the congested state of the vessels of the brain, diminish the dizziness and headache, displace despondency for buoyancy of spirits, and produce an entire psychic change for the better in the individual In the Jacksonian and traumatic types, though we may not be able to guarantee to our patients a definite cure, we may quite confidently assure him of a mitigation of his symptoms and a removal of the conditions which, if left undisturbed, in many are liable to lead to serious symptoms later in life Nevertheless, it has been my aim to warn against being too optimistic, or too sanguine in exacting from intracranial surgery, results which we well know at the present time we may not hope to realize in any but a small proportion of cases

115 West 49th Street

A MIXTURE FOR LOCAL ANESTHESIA —Le Gerant and E Pierre (*Le Moniteur Thérap*,, 1895, xxii, p 160) The following formula is given for local anesthesia, to be applied as a spray

Chloroform	10 parts
Ether	15 parts
Menthol	1 part

The anesthesia resulting from the application lasts about five minutes —*Am Med Surg Bull*, Dec 1

THE MORAL TREATMENT OF EPILEPSY

Read in the Section on Neurology and Medical Jurisprudence at the Forty-sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY H M BANNISTER, M D
FELLOW CHICAGO ACADEMY OF MEDICINE ETC
CHICAGO

In a discussion in the Chicago Academy of Medicine last October, I made some remarks on the *moral* treatment of epilepsy, the substance of which afterward appeared in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION and the *Medical Standard* The subject appears to me, however, extensive and important enough to justify me in again calling attention to it, and perhaps stating certain points more fully than was done on the occasion referred to

If there is any fact established in pathology, that epilepsy is a disorder of the cerebral cortex must be admitted as such While we may perhaps allow, with some of the Italian school, that in certain exceptional cases the basal ganglia may vicariate for the cortex in some of its functions, the general truth that convulsive manifestations, such as are characteristic of this disease and of cortical origin, may be considered as established It, therefore, is a disorder of the highest organ of the nervous system, one that is the organ of psychic functions, and its motor manifestations are most prominent on the very boundary line between psychic and non psychic affections

As might be expected, this being the case, we find that the disorder of which epilepsy is a symptom has close anatomic relations with mental disease which coincide with its clinical features It affects the highest controlling apparatus and the one also which reacts to every influence, moral and physical, that may affect the organism, and which in disease is the most liable to its disturbances in its functioning from all kind of external irritation In epilepsy, the condition of the brain is preeminently that of irritability, and the epileptic attacks of every type are only the extreme manifestations of this irritable condition In a very large proportion of cases in common life, this chronic irritability is hardly noticeable, and the attack has apparently little effect upon the mental functions or the character Yet, could we get all the facts in most of these cases it is highly probable, indeed, almost certain, that there would be found some exciting cause for the attack, and that often a psychic one, that was more or less avoidable At least this is true, I think, in the earlier stages, before the attack has become a sort of habit of the brain, periodically appearing without apparent cause

The treatment of the disease, therefore, would appear to include, not only the medicinal agents that can control this cerebral irritability, but also everything that may remove or favorably modify it, whether in the way of regimen, diversion, suggestion or physical control

The text-books, as a rule, say but little about anything but medical treatment by drugs and diet, etc The briefest mention is sometimes given to the general management and to moral treatment, and it might be inferred that this last is comparatively useless or unimportant To some extent this opinion exists and is due, I think in part, to the notion very generally taught, that all the inconvenient symptoms that accompany epilepsy, the attacks, minor and major, and the pre- and post-epileptic conditions are accompanied with unconsciousness, and that they are therefore not amenable to moral treatment The interparoxysmal irritable condition must, of course, be excepted, but this is generally spoken of as a profound alteration of character, due to irremediable organic lesions, and therefore itself irremediable These views I consider from my experience to be largely based on errors of observation The epileptic has frequently a consciousness of his surroundings, even in the pre- and post-paroxysmal condition, and when there is afterward complete amnesia, he is nevertheless more or less amenable to moral treatment during the continuance of these states I can give numerous facts supporting this view and shall include one or two later in this paper

Excluding all cases of epilepsy in which mental and moral changes are lacking, or, if existing, amount only to a gradually progressive dementia, we may divide the victims of this disorder as regards moral treatment into two great classes, those in whom the dangerous symptoms are transient and connected with the occurrence of the fits, and those whom the irritability and change of character render dangerous at all times In this first class we have patients who are comparatively rational for longer or shorter periods, in which they can appreciate their condition and provide for its emergencies During these periods they are as amenable to moral and prudential considerations as most people, they can realize the need of their restraint and will generally cooperate in any necessary measures if properly treated Sometimes they can exercise sufficient self control to decidedly modify pre epileptic conditions of irritability, as I have often observed

A patient of mine whose disturbed spells, though extremely violent, came on gradually, would confine himself to his room for days when he felt their premonitions, in order not to have them precipitated by any irritation or annoyance from other patients, and sometimes would escape the severer manifestations altogether He was often conscious of his condition, even in many of his worst attacks, but while normally a rather fearless man, when in the epileptic furor, which was to all appearance typical, he was never seen to attack any individual physically more powerful than himself The loss of the higher inhibitions seemed to make him cowardly while it made him violent, and this is a phenomenon I have more than once observed in furious epileptics who are supposed to have no more regard for prudential considerations than a mad dog

In one instance, an extremely violent post epileptic attack of maniacal excitement came to a sudden ending, due, I have reason to believe, to an encounter with an attendant whom we were obliged to discharge because of his treatment of patients That such measures are often employed against epileptic furor outside of asylums, I have the testimony of *intelligent* epileptics themselves, and one, at least, who had been used to a rough life, expressed his contempt of the hospital discipline that did not permit of such efficient treatment in his own case With perfectly humane and legitimate measures, however, it is possible by moral treatment to so modify the disturbed attacks of epileptics in a large proportion of cases, as to render them comparatively harmless Actual automatism, impervious to reasonable and tactful management is by no means so universal in these cases as the text-books would lead one to believe

It is advisable, in my opinion, to keep epileptics to themselves, away from other patients as far as possible, to obtain the best results from moral treatment. While irritable they are sympathetic and can appreciate each other's misfortunes, they are, I believe, less egotistic by far, as a rule, than the ordinary insane. There are, it is true, notable exceptions to this, and they have created the prevalent impression in regard to the whole, but what I say is true at least of the class now under consideration, which form a very large proportion of the epileptic cases in our asylums.

One important point in their management is to have strict but reasonable rules for their control. They are capable of appreciating the necessity of their sequestration, and can be reconciled to it if treated with kindness and consideration. Relaxation of rules can be granted as special favors or rewards, under careful medical oversight, with great advantage, but any indiscriminating laxity, or liberties granted as a right, will be apt to create trouble, as when they are necessarily taken away the patient is least fitted to appreciate his own condition and the need of the restriction. This, I take it, is one of the most important considerations in the management of this class of cases.

The second great class, those who from change of character or constant irritability are to be considered as always dangerous, are also generally more or less amenable to moral treatment. A few are morally insane, but even these have generally some utilitarian sense of what is to their advantage, and are therefore more or less amenable to legitimate asylum discipline. A very large proportion of the whole are reasonable, and will endeavor to cooperate with any judicious physician who gains their confidence, for their own good, and can be taught to exercise self-control to a greater or less extent. Together with the medical treatment to lessen their irritability, it is important to have these patients put under all possible favorable influences, and in some few extreme cases isolation from others to a larger extent is advisable. Some of the most irritable will voluntarily seek this, and if they can be kept sufficiently under observation it is perhaps the best course to favor them in this as much as possible. Moral influences are, however, not inapplicable in these cases, and occasionally the religious tendencies, so common in epileptics and which are, I think, undervalued generally in the treatment, can be utilized.

Many of these patients are not changed materially in their character, they are just what they would be without epilepsy, plus the irritability. Every exercise of self-control has a beneficial effect and religious motives, in which they are sincere, are often the strongest stimulus to this. In one of the most dangerous epileptics I have known, there occurred almost a complete change of character from this cause, while the irritability still existed it was constantly fought, and to a very large extent controlled by the patient's endeavors to live a consistent Christian life. It was a great trouble to him that he could not better succeed, but his dangerous tendencies were pretty effectually suppressed. A little encouragement and show of sympathy for the religious feelings of epileptics, allowing for their inconsistencies and failures as the results of their disease, will, I believe, often be a valuable aid to their management, at least in some well selected cases. In a large number it may do no good, but it is one of the facts that ought not to be slightingly considered in the moral treatment of epileptics. There is no greater moral and social force in the world than religion, and it is one for which epileptics afford a special field in a moral therapeutic point of view.

There are, of course, very great differences between epileptics, and individual treatment in the fullest sense of the word is required for every case. But it is true that, as a class, the epileptics are far more susceptible to what is known as moral treatment than seems to have been recognized by the majority of those who have written upon the therapeutics of their disease.

I have, in the foregoing, considered mainly the epileptics confined in our hospitals and asylums for the insane. Those who can be treated at home, from the only occasional epileptic to the mild epileptic dement, hardly call for moral treatment, though there is a degree of uncertainty as to the conduct and future of any one habitually subject to these attacks. Those, however, who fall within the two classes I have mentioned have their proper place in an asylum or special institution, and it is in such that what can be called moral treatment is applicable and useful. The separation from former influences, the subjection to necessary discipline, the regulated employment and diversions, are as essential and even more valuable remedial agents, than anything that can be prescribed in the way of drugs and diet. Patients who have been violent and troublesome, even to the extent of falling into the criminal class, under these new influences often become amiable, docile and industrious. I have one in mind who had been committed for violence and petty offenses some forty times, whose head was scarred all over with marks of clubbing and to whom fighting had come to be almost a second nature, who became in his way a model patient—cheerful, manageable and industrious, simply by being placed among considerate fellow-sufferers under a kind and tactful attendant. Undoubtedly there are many such who have been considered as dangerous, and really are under the condition of ordinary outside life, but who can be useful and happy inmates of a well-conducted epileptic colony, such as now are being proposed or started in various parts of the country. There will be a proportion who will require restraint, but the majority of these can be modified for the better, and life made happier and easier for them by judicious moral treatment. The incorrigibly bad, those who exemplify the epileptic character as it has been described, are but a small minority of the whole.

I have not directly mentioned, but have only indicated in the foregoing the hysterical element that exists in the case of most epileptics, and which, when we carefully study them, is often very clearly manifest. It plays a very important part in the character of many of these patients, but is often entirely overlooked in their treatment. We should, I believe, consider all pronounced epileptics as more or less hysterical, and adopt measures to meet this element in their case. Naturally, these will be largely in the nature of moral treatment.

While medical treatment is the mainstay in epilepsy of the milder types, that can be treated outside of institutions, it often is only secondary to the other measures mentioned, in the more advanced cases with dangerous tendencies and direct mental mpairment that compose the two great classes conidered in this communication

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MY EXPERIENCE WITH SOLANUM CAROLINENSE IN THE TREATMENT OF EPILEPSY

Read in the Section on Neurology and Medical Jurisprudence at the Forty-sixth Annual Meeting of the American Medical Association at Baltimore, Md May 7-10 1895

BY C F BARBER, M D

BROOKLYN, N Y

In February 1893, my attention was called to the use of *solanum carolinense* in epilepsy, accordingly, I made an effort to learn something of its efficacy, also of its source before utilizing it in my practice

I found *solanum carolinense*, or, as it is more commonly called, horse nettle, bull nettle or sand brier, was not official It is not recognized by the U S Pharmacopœia, but a description short, it is true, is found in the Dispensatory of 1894 It is a native of Florida and Carolina but is found as far north as Connecticut, grows from one to two feet in height, branching, and is covered with shaggy hairs which are armed with stout, straight, yellowish prickles The leaves have the same armor for defense as do the stem and branches The berries which are the fruit of the shrub are utilized in preparing the preparations used in medicine, and when mature are of an orange yellow color The shrub prefers a sandy soil for its growth and is most tenacious of life when once established

Little has been written about the drug or its action, consequently there is little to review Krauss isolated wo active principles in 1894 solanin and solanidin Only two preparations have thus far been used, the fl ext and a 20 per cent tincture

The honor of placing this agent before the profession is due Dr J L Napier of Blenheim, S C In 1889 his paper was read before the South Carolina Medical Society and after explaining the results of his observations among the negroes who use the berries in whisky, making a tincture, he concisely depicted its results in his hands, which, I may add, were exceedingly encouraging Finding that the primary users of the berries were in the habit of administering them in cases of convulsions, the doctor ecured some of the preparation used by the negroes and administered it to a case of epilepsy which had baffled the energies of all the medical men in the vicinity and obtained surprising results One case after another, doing well under its employment, he gradually became a convert to it as a therapeutic emedy in epilepsy and allied disorders

Dr Geo F Foy, F R C S, in *Medical Press and Circular* (*Medical Age* 1890, p 18), refers to the reults of Dr Napier in a very complimentary manner and speaks as though he had much hopes from the drug

In March, 1893, I obtained from Dr A G Selman, of Indianapolis, a sample of the tincture My wards at the Kings County Hospital having many epileptics among their occupants, I at once placed several upon the use of the remedy At this time I subjected only those having the *grand mal* type of the disease to he use of the drug From one to six convulsive eizures is the record of these patients for twenty-our hours

As is the case in many instances where the drug is changed in the treatment of epilepsy, my immediate results were encouraging, for not a convulsion occurred for days For several weeks the improvement continued, some of the patients brightening mentally This latter condition may have been due simply to suspension of the bromid treatment In a few instances, slight drowsiness, and in one case vertigo was complained of These symptoms were quickly relieved by either lessening or suspending the quantity given

The individual histories of this series of cases, I regret to acknowledge, have been lost or mislaid I was not aware of this fact until after I had promised to prepare this paper at the solicitation of your worthy Secretary

In two cases, one of epileptic insanity the other having mild epileptic seizures, I had the pleasure of noting marked improvement in each instance The case of epileptic insanity had been under my caré at times for six or seven years with little or no improvement He had been subjected to all forms of treatment, but no favorable result, even for a short interval, was even noted until the drug in question was tried The attacks occurred in this boy both at night and during the day, the periods of insanity lasting from a few hours to several days While under the use of this drug, he brightened mentally and his convulsive seizures were reduced from three in twenty-four hours to two a week

In a little girl who had mild epileptic seizures, two or three occurring each week, I had the satisfaction of knowing that her condition was so much improved that her parents considered her cured I doubt this statement, but am willing to admit that the paroxysms were so mild in character that an untrained observer would consider them simply little nervous turns

In no case, thus far, have I seen the seizure cease entirely, as has been the experience with some of my predecessors in the use of solanum I have had no bad effects, save the slight dizziness spoken of and the drowsiness

I must ask the pardon of this Section for presenting this incomplete report, but as I can add some more positive data I shall hope to be excused for placing the foregoing before this distinguished body

My later investigations have been conducted with the fl ext of the drug obtained from Parke, Davis & Co The dose has ranged from half a drachm to half an ounce The ages of the patients from 8 to 50 years, and the cases have comprised those suffering from epilepsy with idiocy, epilepsy with insanity, epilepsy with *grand* and *petit mal* and epilepsy from traumatism The cases the results of trauma were of old standing and had been reported as cures, each having been operated upon They had however, from two convulsions in twenty-four hours to eight or ten in the same time

In observing my last experimental cases, I have been greatly aided by the watchful care of Dr F Welker, who has carefully tabulated the results from day to day Eight of the cases are attending the school for feeble minded children which is an outgrowth of the idiot ward

Of these, three are boys and five girls The girls, who are in the habit of having epileptic attacks each day, did well for a period of three weeks, not a convulsion occurring At the end of that time, however, I began to regret that I had ventured to test the usefulness of the drug, for at a most inopportune time they all had convulsions and from this relapsed into their former state, that is, the condition I found them in before beginning the use of solanum Although the dose was pushed, no improvement was noted and the treatment was abandoned

With the boys a different state of affairs prevailed They had an outbreak a few days following the girls but milder Another period of about a week's duration intervened, when they gradually relapsed into their epileptic state

Among the epileptics who were subject of *grand mal*, I had about the same results as I had experienced with the male epileptic idiots, save that the period of improvement continued longer and the relapse was more gradual Ten who were under the drug did not have a convulsion for twenty-nine days Then a case which was in the habit of having from three to six seizures per week had a mild attack, not being obliged to lie down This patient is mentally much brighter than he has been for some time and is now capable of doing light work about the ward, which is contrary to his condition in the past He now has his epileptic attacks, but they are milder in form than previously I will not take the time of this Section going into the histories of these cases, but briefly cite three or four cases as examples of my general results

Michael D , age 19 years, has been a subject of epilepsy for a number of years (exact period unable to ascertain, patient being an idiot) Patient had one seizure per week for a long period before taking *solanum carolinense* After placing the patient upon the use of the drug no improvement was noted

Mary H , age 23 years, has been a subject of epilepsy since her menstruation first appeared, is mentally bright save a period of slight stupor after a convulsion Before using the drug she averaged three convulsions per week Under the use of *solanum carolinense* she had an equal number and they were more severe in character

Henry K , age 35 years, has had epilepsy since 18 years of age Attacks followed the kick of a horse He will average one a day and very severe Patient is violent at times While under the use of the drug in question he had several a day and of great severity These are examples of many cases of which I have histories, but illustrate results obtained in my hands by the use of *solanum carolinense*

In the *Medical News* of recent date, Dr E D Boudurant, of the Alabama Insane Asylum, has placed his experience before the profession and his results are no more flattering than mine A few conclusions can be deduced from the work done with this drug

1 That *solanum carolinense* is not a substitute for the treatment now generally accepted for epilepsy

2 That it is a preferable substitute for the bromid treatment when compared with the biborate of soda

3 That it unquestionably has an influence over the disease, although mild It sufficiently controls the disease so as to warrant us in substituting it for a time to relieve our patients of the depression produced by the bromid treatment

4 Its toxic effects are nil

Dear Doctor —Please direct the attention of your friends to *our* JOURNAL. We will be pleased to send sample copies to any names you may suggest

THE SUPPLEMENTARY TREATMENT OF EPILEPSY

Read in the Section on Neurolology and Medical Jurisprudence at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore, Md , May 7-10, 1895

BY A N WILLIAMSON, M D
NEW LONDON CONN

The brief paper to which I beg to call your attention for a few minutes is simply a plain commonsense talk on the treatment of epilepsy, my object being to point out how our ordinary methods of treatment may be supplemented and made more effective by closer attention to certain points too often considered of minor importance I do not know that any one is able to tell us very much that is new in regard to the etiology or pathology of this disease, but we may hope to make some advance in the matter of treatment I have lived with epileptics for the past fifteen years, have studied the disease in its various manifestations, and it is possible that what I have learned in regard to the minutiæ of treatment, the minor details which are beyond the reach of the general practitioner, may be of interest to you I shall not speak of epilepsy due to organic disease, where the convulsion is a symptom merely, but to *true* epilepsy, where, so far as we know, the convulsion *is* the disease

Now, we have the power through a certain remedy of controlling the manifestations of this disease to a certain extent, giving a patient certain relief for a month, three months, sometimes a year—when a relapse occurs If the convulsions can be successfully warded off for so long a time, and the patient kept in apparent perfect health, are we not justified in the inference that, by proper treatment and care, that period of immunity may be prolonged, perhaps indefinitely? What causes the recurrence of the attacks after a year's immunity? Is it, or is it not a preventable cause? If we are using the bromids is it because, after a time, they cease to influence the system as they did at first? We do not think so My experience leads me to the conclusion that the recurrence of the attack is due in most instances to *preventable* causes. There are three directions in which we can look for the causes of this recurrence

1 To the constitution of the patient and his capacity for tolerating the requisite doses necessary to control the spasm

2 To the condition of the digestive system

3 To the question of personal habits, exercise, occupation and personal discipline As to medication, the bromids are, from their positive value, in such general use that, in considering remedies, it is hardly necessary to refer to any other agent Yet, in spite of this absolute value and relative success, they are held in almost universal opprobrium by the laity everywhere

People who write to me for advice nearly always ask the question "Do you use the bromids?" to which an affirmative reply probably ends the correspondence Is this opprobrium deserved, or can we trace the fault to other sources? The bromids exert a powerful effect upon the system and the physician can not do justice to the patient or to himself unless he watches the effect carefully from day to day graduating the dose to suit the varying conditions of the case It is especially important in this disease and, in fact, in all diseases, to become early acquainted with the exact dose required in each individual case, in order to produce the effect sought. A dose which will profoundly affect one person, will be entirely inefficient in another. It is not uncommon to see epileptics, having a tendency to mania, driven into a positive outbreak by an overdose of the bromids. In such cases it can be used only with the greatest care and in small doses, even if at all. The patient must be kept under close observation and the remedy suspended at the first sign of mental trouble. In any case, the stage of full bromism should be avoided. If the bromids will not control the attacks until that stage is reached, we may be pretty confident the case is hopeless. It is my rule to push the dose to the point where the effect is only very slightly noticeable; mentally and physically the patient should be a little below the normal. To neglect, or inability of the physician to watch the matter carefully, we can easily trace one of the reasons why failure so often results from the use of the bromids. The immense amount of treatment done by quacks, through correspondence, has largely helped to bring the bromids into disrepute. There is no room to doubt, then, that a faulty administration of the remedy has much to do with bringing about a recurrence of the attacks.

Next to medication, and almost equally important, is the care of the digestive organs. To neglect of these organs we may undoubtedly trace a large proportion of our unsuccessful cases. General directions in this particular will not suffice. An epileptic is always balancing at the verge, ready to topple over into a convulsion at the slightest provocation; and if he has a weak stomach and poor digestion he stands little chance of obtaining permanent relief. And if we go back to the time of the first seizure, I am convinced that the one prominent factor, not only in exciting but perpetuating the attacks, is abuse of the digestive organs. Predisposing causes exist, either hereditary or peculiar to the individual case. I refer to determining causes. The books tell us that the convulsions of children are caused ordinarily by teething, worms, or fright, and in adults by self abuse, tobacco, or mental anxiety. Well, teething is a natural process, worms are seldom in evidence, and I have never yet seen a case in which the attack could be traced to fright or mental anxiety. But I have traced the cause, in many cases, to a stomach distended with indigestible food, or an intestine filled with impacted feces. In infancy, nature sometimes intervenes and relieves the over-full stomach by vomiting. But, too often, it is to a thoughtless mother or a careless nurse that we may attribute the first onset of this dreadful disease.

It is absolutely impossible to get satisfactory results from medical treatment if the stomach is given more to do than it can do with comparative ease. Whether the result is due to local irritation or to interference with the circulation, certainly undigested food is quite as probable a cause of convulsions as worms, and a cause much more frequently present. The habit of constipation is almost universal in this country, and often it is acquired in childhood. It must be overcome, one way or another, if any favorable results are to be obtained from treatment. An epileptic who is not habitually constipated is an exception. It is my rule to allow no patient to go over a day without a free movement. If necessary, an injection of tepid water is resorted to before retiring. In the matter of diet, constant watchfulness is necessary, both as to the quantity and quality of food taken. An ordinary plain diet, everything of the best, is safe in most cases, but the quantity must be rigidly restricted. Epileptics have often extremely voracious appetites which it is fatal to indulge. Relatives and friends can hardly be expected to possess the requisite judgment to act as a guide in such cases, and even with the best intentions their sympathies lead them to be over-indulgent. There must be no faltering in this matter. Food necessary for health and strength must be given, but none merely to gratify the appetite or fancy. We can not attribute the fault to the bromid if the patient is thrown into a convulsion by over-indulgence of the appetite.

In the matter of exercise, it is important that a physician's judgment should be always at command. Many persons entertain the belief that exercise, carried to the point of fatigue is injurious, and likely to provoke an attack. I have not found it so. On the contrary, exercise and plenty of it is a *sine qua non*. No patient with this disease thrives, if he is sluggish and inactive, with poor circulation and cold extremities. Those who are active, erect, quick in their movements, fond of outdoor exercise and work, are the ones who respond most readily to treatment, and are the least affected by the depressing influences of the medicine. A disposition to lie about, with round shoulders, shuffling gait, and pallid face, forebodes an unfavorable result. Where a patient's general health is good, he may work all day at manual labor, not only with safety but with positive advantage. In all my experience, and it is pretty large, I have never seen an attack brought on by fatigue. Constant exercise keeps the mind occupied, a very important point in this disease, stimulates the circulation, and gives a healthy tone to the whole system.

Another point looking in the direction of preventable causes of failure, is personal discipline. Epileptics are self-willed, obstinate as a rule, easily angered, and regardless of consequences; and especially need the controlling influence of a strong mind and a strong hand. Loomis says, in his "Practice," that mental impairment is not common in epilepsy. On the contrary, in my experience, it is the exception to find an epileptic whose memory, judgment and reasoning powers are not more or less weakened. Whether young or old, as a rule, they require a master; one to whom they will yield obedience without question, otherwise there is a constant struggle, which keeps both patient and guardian, whether physician or friend, in a constant turmoil. An epileptic child stands in far greater need of strict discipline than a healthy one, for his judgment being weakened, he yields more readily to the influence of passion or to temptation in any form, and has a lessened appreciation of his fault.

In the matter of treatment and its results, it is worthy of note that the milder manifestations of the disease, the *petit mal*, yield less readily to treatment than the severe convulsions. Where the two forms coexist, it is often possible to relieve the patient entirely of the severer seizures, while the slighter ones may persist indefinitely. I have found the bromid of ammonium, in the largest possible doses, to give more relief than any other preparation. In regard to the general use of the bromids, there are some authorities who advise pushing the remedy in full doses until bromism is reached, and then suspending its use until an attack occurs, repeat the same process

It is hardly necessary to say that this course results in final failure In the first place, as I said before, it is never necessary to push the remedy to the point of full bromism In the next place, our object is not to stave off the attacks for a time, and then suspending the remedy, wait and see if they recur, but, on the contrary, to keep the system under constant control, with the definite purpose of prolonging the period of immunity to the furtherest possible limit This is certainly the correct theory, if every added month gives the system additional power of resisting the onset

Since true epilepsy depends on such a condition of the nerve centers as can not be recognized by any means within our knowledge, we may fairly term it a habit, and, like other habits to which the system becomes habituated, the longer the period of abstention the less likelihood of a recurrence There is no permanence in the influence of the bromids, their influence is transient, and we can not continue the effect unless we continue the administration, for, ordinarily their controlling power is entirely gone in about thirty-six hours after their administration ceases

As regards the relative value of the different preparations, the bromid of potassium is without doubt, singly, the most efficacious, but I have found far preferable in a majority of cases, a combination of bromid of potassium six parts, sodium two parts, ammonium one part, given always before meals, and never more than twice a day, except in those cases requiring very heavy doses In cases requiring only from fifteen to twenty grains daily, I administer it in one dose In selecting the time for administration it is well not to forget the importance of interfering as little as possible with the digestive functions It requires a strong stomach to tolerate such a dose before breakfast, and, if given before retiring, a coated tongue and foul breath will commonly be in evidence in the morning

If we are seeking for preventable causes of a recurrence of the attacks in a case under treatment, none of these seemingly trifling points are of too slight consequence to deserve our serious attention It has been by this almost microscopic care of each individual case that I have been able to treat successfully, cases that had failed to obtain relief at the hands of men of far greater reputation and ability than I possess There is no question as to the permanent value of following out such an inflexible line of treatment as I have tried briefly to describe It is true that it is impossible to enforce such a rigid and systematic routine in general practice, but that does not affect the facts of the case To illustrate the results of the rigid surveillance I have described, permit me to refer to seven cases now under my treatment for periods varying from ten months to three years typical cases, presenting all the varied features appertaining to the true epileptic Ages, 10, 12, 15, 17, 20, 45 and 60 In five cases the disease began in infancy, in one, a robust man of 45, it had existed three years only, in another, a lady of 60 years of age, the attacks began thirty-five years previously In none of these cases, although they had all been under the bromid treatment, had there been less than two to six convulsions a week In one, a boy of 15, there was often as many as ten a day When they came under my care, I put them all on the bromid mixture to which I have referred I graduated the quantity of food with as much care and exactitude as I did the medicine I compelled a liberal amount of exercise in all weathers The result is worth noting The boy of 15, who had formerly from five to ten seizures daily, has not had a single attack since treatment began, twenty-three months ago, the boy of 10, under treatment for fifteen months, has had no attacks The boy of 17, whose case had been abandoned as hopeless, has now been free from attacks for five months The fourth case, a young lady of 20, has now been under treatment for three years with only one attack during the entire period, and that directly traceable to indigestion The lady of 60, who had weekly attacks for a period of thirty-five years, has had one seizure only in the past fifteen months, and that undoubtedly due to overeating The sixth case, a boy of 12, pronounced incurable by his physician, has been under treatment for eleven months, with one convulsion only, in which, by the way, he rolled from the top to the bottom of a long, steep flight of stairs without doing himself any injury The seventh case, a robust, strong healthy appearing man of 45, was entirely unable to make use of the bromid preparation in any dose, the effect being to induce a severe attack of mania Under the use of the oxide of zinc he has been kept free from attacks for upward of three months

It is evident that the favorable result in these cases has been due solely to the close personal supervision in all points to which they have been subjected I consider such a record exceptionally worthy of note, as showing the value of a closer attention to the minutiæ of treatment

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PREVENTABLE DEAFNESS AND ITS INFLUENCE ON SUCCESS

Read in the Section on Laryngology and Otology at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore, Md, May 7 10 1895

BY JAMES G H NICHOLS, M D
NEW YORK

The conception of government in its modern sense involves many ideas and tendencies formerly unthought of or unheeded, but which are beginning to be considered fundamental and necessary principles in their application to the present generation, and more especially to those following In our own department of thought and activity, preventive medicine has made great strides, and is now recognized as it should rightly be, as precedent and superior to curative medicine

The subject I wish to bring briefly to your attention is one which I believe to properly come within the scope of our discussion, and to justify such attention by its importance It is the occurrence of deafness in children, the causes of the same, and th question whether the State, through a properly qualified medical officer of the school board, should no insist on the early detection and remedying of this as well as other kinds of disease, as being an important factor in the after-success of the child and consequently in its effect on the general welfare of th community

Occurrence —First, as to the occurrence of deafnes in children, we find most commonly two varieties o ear disease, chronic suppurative otitis media an chronic catarrhal otitis media as the cause of deafness The former follows acute colds in the head the exanthemata or external causes, and become chronic from neglect, and a wide spread belief among the lower population that a running ear will stop spontaneously. To this most harmful notion is due the chronicity of the disease and the loss of hearing, for had the case been early attended the trouble could, in the great majority of instances, have been aborted without permanent injury to the middle ear structures. Over 40 per cent. of chronic suppurative cases give a history of beginning in childhood, but of having no treatment whatever until the impairment of hearing in adolescence became so great as to interfere with the occupation of the individual. It is certain that in most of these cases the disease could have been prevented entirely, or at least stopped in an early stage, had the parents been sufficiently intelligent to recognize the necessity for treatment, or, better yet, had the child on its first entrance into school life been subjected to a critical examination of its physical condition, as well as its mental acquirements. Recently two cases have come under my observation, both promising young men to whom entrance to West Point Military Academy was denied, solely from the existence of a chronic suppuration in one ear, not affecting the hearing in a marked degree, but still sufficient to debar them from a most useful and profitable life career. From the history of both these cases I am positive that had the attention of the patients been called to the disease by the school authorities on the boys' first entrance, this unfortunate ending could have been prevented.

Frequent colds in the head are a prolific source of acute ear disease, by simple extension through the tube. Here, again, is another preventable condition, due largely to improper hygiene, both at home and at school. The Americans are not a bathing people, and I have observed that children when they reach the age of 4 or 5 years cease to receive their daily bath, and it becomes a weekly or bi-weekly function and then a warm one instead of a cold one. It is not necessary here to more than refer to the immense prophylactic influence of daily cold tubbing in catarrhal diseases, and I fail to see why this habit of cleanliness and health should not be inculcated in the child and included early in its instruction, as well as instruction as to the effect of alcohol on the system, or the science of government.

The second class of cases consists of the chronic catarrhal ones, even more important, because so insidious is their onset and so slow their progress. They are the sequels in some instances of the chronic suppurations, but much more largely due to obstructive condition of the upper air passages, such as adenoids, hypertrophied tonsils, deviation of the septum, chronic hypertrophic rhinitis and pharyngitis, the percentage is about 65 per cent. in which these conditions are found, and they are all remediable and are demonstrated facts. Why wait until a chronic catarrhal condition has become established, why not detect it early when there is every hope of success in curing it? I need not enlarge on the presence of cases like this. The observations of Chaphill and others prove them. Admitting that deafness in children is in most cases due to preventable causes, we are led to ask what are the respective responsibilities of the State and the parent in this matter? Abstractly regarded as a matter of self preservation and progression to higher civilization, the State has the right and the duty to supervise the health of its citizens. This is conceded by the establishment of boards of health to enforce sanitary laws of general application in the drainage of communities, their water supply, the construction of houses and the control of epidemics and contagious diseases. More recently local legislation compels vaccination among all school children at stated intervals, inspection during certain seasons of tenement houses and institutions, isolation of suspected cases, reports of diphtheria, with disinfection of premises, etc. Some States go a step further. New York, for instance, requires midwives to report *instantly to a qualified practitioner* any case of ophthalmia neonatorum arising in their practice. Legislation is even being agitated looking to the compulsory examination of the eyes of school children with a view to the discovery of latent astigmatism, myopia, etc., and advanced ophthalmologists have taken great pains to investigate the proper lighting of school rooms, the position of pupils in regard to the light, and in regard to their work, the ventilation of the room, and they have found, as in Snell's most recent report in the *Medical Annual*, overwhelming evidence of the importance of early attention to small things.

The ear, the nose and the throat are at least as necessary to perfect health and comfort as the eye, and, commercially, as valuable to the possessor. Why should not the community, therefore, in its general oversight of the health of its constituent individuals take upon itself also the detection of diseases of the eye, ear, nose and throat as a matter of routine in its educational scheme? In other words, the physical condition of the child should be inquired into, as well as his intellectual condition *at the start*, and thereafter at regular intervals *pari passu*, by a regularly constituted examiner attached to the school board. Owing to the advanced state of post-graduate instruction, there are numbers of qualified men available for such positions, but any practitioner competent to fill the post of health officer to a community, would also be competent to apply such tests as would serve to detect the existence of disease, and if not to treat them, to refer the parents to the proper place for treatment, indeed, it is not a part of the duty of such an officer to undertake the treatment of such cases unless in case of poverty, but simply to discover them, make them a matter of record and properly notify the parents or guardian of the necessity for treatment. Such a scheme consists of the following essential points.

1. The appointment in every school district, by the school board, of a properly qualified medical man, whose duty it should be to attend on the registration days at school and examine all the children presenting themselves for the first time, as to their vision, hearing, condition of nose and throat, freedom from contagious disease and habits of cleanliness. He should make a record of the same in the school register and, should any disease be found, should notify the parents, on a proper blank, of its existence and the need of treatment.

2. During each school year he should examine every child in his district in the same manner and should keep a record of the same, and note if his recommendations have been complied with.

3. The medical examiner should supervise the heating, lighting and ventilation of the school rooms and should have power to enforce his recommendations. He should, at stated intervals during the year, give instructions to the pupils, and by circular letter

to the parents, in regard to the care of the eye, ear, nose and throat, and general hygiene

Legislation to this effect will be sought in New York during the next session of the Legislature, and while it is not thought that the time is ripe for such an advanced law, yet the value of constant agitation is very great, and it is hoped that this body will voice its approval of the principle involved, and that its members will aid in every way possible to bring the matter before the public

DISCUSSION

DR LEWIS H TAYLOR—While the paper just read, Mr Chairman, does not present anything especially startling, I, nevertheless, think it one of the most important papers read before this or any other Section A few years ago I heard a gentleman, in discussing diseases of nose and throat, say that every one should use an atomizer with proper solution to cleanse his nose and throat with the same regularity as he would brush his teeth, and as part of daily toilet I thought this an exaggeration, but the more I investigate the subject of deafness the more I am inclined to think he was right, for it is mainly by correcting the catarrhal trouble that we may prevent chronic deafness There is presented this afternoon in the Section on Ophthalmology, an elaborate report on the investigation of the eyes of school children, and this will be followed, no doubt, by action of the Section, looking toward securing legislation on this important question, the preliminary steps having been taken at the San Francisco meeting The examination of the hearing of school children is no less important, and I hope this Section will express its approval of the suggestions made to this end by Dr Nichols

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REPORT OF THE COMMITTEE ON THE DISPOSAL OF THE DEAD

Read before the American Public Health Association, held at Denver, Colo , October 1-4, 1895

BY C O PROBST, M D , CHAIRMAN

COLUMBUS, OHIO

The proper disposal of the dead is a matter which greatly concerns the living The dead have been disposed of in various ways in different times and places, no useful purpose will be served by going into the history of the subject, and this report will be confined to the consideration of cremation and earth burial The history and progress of cremation in the United States (there are no crematories in Canada) will be reported upon briefly, and an attempt has been made to summarize the laws of the various States and provinces, with respect to disposal of the dead, more especially as to sanitary considerations taken note of in such laws Rules and regulations of State and provincial boards of health, as affecting this question, have also been given as far as possible

The first crematory in the United States was established at Washington, Pennsylvania, in 1876, by Dr F J Le Moyne It was used for the first time on December 6 of that year, when the body of Baron de Palm was cremated Dr Le Moyne's crematory excited great local opposition, and this local feeling, apparently, was never overcome, for the only resident of Washington to be cremated in this furnace was Dr Le Moyne himself In 1884 this crematory was practically closed by the decision of the trustees to limit its use to those living in Washington County, and there have been no applications and no cremations there since Thirty-eight bodies were cremated, twenty-nine males and nine females

The second crematory was also in Pennsylvania, at Lancaster, and was opened Nov 25, 1884 Three bodies were cremated in that year, thirty-six the following year, but not more than fourteen in any year thereafter The secretary of the company, Mr J D Pyatt, writes "We do little work here now, we got in our work as pioneers, and have spent six or seven thousand dollars doing it, with no dividends " Eighty-nine bodies have been cremated, only nine being bodies of residents Sixty seven were males and twenty-two females Death was due to contagious disease in thirteen cases

The following year, 1885, the most successful of all the crematories in the United States was opened at Fresh Pond, Long Island, N Y Five bodies were cremated in that year, 82 the next, and in 1894 there were 254 To August 28 of this year there were 208 cremations, making a total of 1,554 Of these 1,084 were males and 470 females Including phthisis pulmonalis, 290 died of contagious disease It is interesting to note that 806 of those whose bodies were incinerated were born in Germany, 513 in the United States and the rest in the various countries of the world

In 1886 Pennsylvania established her third crematory, and New York her second The one in Pennsylvania was constructed at Pittsburg by Mr Sampson, an undertaker The number cremated to the end of 1894—the latest date available—was 100, 63 males and 37 females

The second New York crematory is at Buffalo, and was opened with a test incineration Dec 27, 1885 Eight were cremated in 1886, 37 in 1891, the greatest number in any year since, and 29 to September 5 of the present year The total number is 250, 166 males and 84 females One hundred and forty eight were residents and 102 non-residents

In 1887 three crematories were added to the list, one at Cincinnati, one at Los Angeles and one at Detroit The Cincinnati crematory was opened June 22, 1887, and 11 were cremated that year The number increased to 46 in 1894, and for 1895, to August 16, there were 44, making in all 314 Two hundred and fourteen of these were males, 100 females, and 38 were children under 15 years of age Two hundred and forty were residents, 74 non residents, and 62 died of some contagious disease The Detroit crematory was opened Dec 10, 1887 The greatest number cremated in any one year since, was 45 in 1893, the total number to April 20, 1895, was 183 Of these 125 were residents and 58 non-residents One hundred and eleven were males and 72 females, 24, counting phthisis pulmonalis, died of some contagious disease Only partial statistics were obtained from Los Angeles The crematory was opened June 6, 1887 Seven bodies were cremated that year The greatest number in any one year since was 41 in 1892 The total number to the end of 1894 was 182, 119 males and 65 females

It is an interesting fact that the name of the President of the Cremation Society of Southern California, having its crematory at Los Angeles, is Dr Wm *Le Moyne* Willis

St Louis and Philadelphia established crematories in 1888 According to the report of the Bostonian, it is peculiarly fitting that Philadelphia should be well provided for the disposal of the dead The Bostonian was showing a Philadelphia friend over Boston The Philadelphian remarked "You have a great city here, but you are not nearly so well laid out as Philadelphia " "True," retorted the Bostonian, "but we doubtless will be when we are as dead as Philadelphia "

The Philadelphia crematory was opened in May, 1888 There has been a gradual increase in cremations, with 70 in 1894, and 75 for 1895 to August 11, the total number is 399, of which 264 were males and 135 females Three hundred were residents and 99 non-residents Twenty six of those cremated died of a contagious disease

The St Louis crematory was opened in 1888, since which time to Sept 18, 1895, 137 bodies have been cremated The number has gradually increased from year to year, with 70 for 1894 Three hundred and forty of those cremated were residents, 97 non-residents Three hundred were males and 137 females None died of a contagious disease

Baltimore established a crematory in October of 1889 Up to May 14 of this year only 84 bodies had been cremated, 57 males and 27 females None died of a contagious disease

In the same year a crematory was constructed on Swinburn Island for the destruction of the bodies of those dying of a contagious disease in quarantine or on vessels at New York To the end of 1894, the latest information at hand, 109 bodies had been incinerated

In 1890 a crematory was built at Troy, N Y, by Mr and Mrs Earl for their only son, Gardner To the end of 1894, 56 bodies had been cremated, 37 males and 19 females

The following year, in March, Davenport, Iowa, erected a crematory Thirty six cremations have occurred there to April 20, 1895 Of these 27 were of males, 9 of females

The same year, 1891, Mr Wm Osborn of Waterville, N Y, erected and donated a crematorium to the Waterville Cemetery Association Only 5 bodies have been cremated there to August 16, 1895, 4 males and 1 female, one being the body of a resident

The year 1893 witnessed the building of crematories in three important cities Chicago, San Francisco and Boston

The Chicago crematorium was opened in December, since which time to August 27, 1895, 87 bodies have been incinerated Of these, 54 were males, 33 females, 60 were residents and 27 non-residents One person died of a contagious disease

The San Francisco crematory was opened Nov 12, 1893 On May 1, 1895, 200 bodies had been incinerated, 112 males and 88 females One hundred and thirty of these were American born Three died of a contagious disease

Boston inaugurated cremation next to the closing day of 1893, the person cremated being a resident of Massachusetts In 1894, 97 persons were cremated, 78 of them being residents of the State In 1895 to April 22, there were 30, with 22 of them residents In all there have been 118, a very good beginning Here, as was to have been expected, women have had equal rights, (not rites) and 59 males and 59 females embraced the new faith of cremation Four of the subjects died of diphtheria, 3 of influenza and 1 of typhoid fever

The latest crematory to be constructed was the Odd Fellows Crematory at San Francisco The first incineration took place June 25, 1895 Up to August 22, 28 bodies had been cremated, 18 males and 10 females None died of a contagious disease

The total number of persons cremated in the United States at the close of this inquiry was 4,261 Omitting Swinburn Island, from which information as to sex was not obtained, there were 2,783 males and 1,369 females

The main reason for the great preponderance of males doubtless is the number of cremation societies that have been established, composed largely of males, whose members make provision for the cremation of their bodies at death

Omitting Pittsburg and Buffalo, from which information could not be obtained, 526 of those who were cremated died of some contagious disease, about 13 per cent

Nearly all of these crematories are managed and operated by joint stock companies The usual price for cremation is $25 The highest charge is at San Francisco, which is $60

Massachusetts, Michigan, Pennsylvania, California and Ohio are the only States, so far as found, whose laws recognize cremation in any way, and Massachusetts seems to be the only one in which cremation is fully regulated and controlled

The only objection urged against cremation, aside from sentimental reasons, is that cremation destroys evidence of crime Cremationists claim that the extra precautions taken to verify the cause of death give, in reality, greater security against this than does earth burial, as ordinarily practiced The usual precaution in this country is to require the affidavit of a physician, not necessarily in all cases the attending physician, "that to the best of his knowledge and belief there exists no reason why the deceased person should not be cremated " This is sworn to before a notary, or justice of the peace, who certifies that the affiant is by him known to be a physician of good standing Several crematories accept bodies for cremation when accompanied only by the ordinary board of health permit, this permit being issued, however, only on presentation of a certificate from the attending physician as to the cause of death It will readily be seen by those familiar with the usual methods of issuing certificates, that the opportunity this offers for concealment of crime is very great Even an affidavit by the attending physician, with certificate of the notary as to his standing, when the body is brought from abroad, affords no adequate barrier against this danger

In Massachusetts the location and construction of crematories must first be approved by the State Board of Health The Board also establishes the regulations which shall govern their use, and the body of a deceased person may not be cremated until forty-eight hours after death, unless due to a contagious disease In addition to the customary burial permit, which is issued only on certificate of the attending physician as to cause of death, there must be a certificate from the medical examiner of the district within which the death occurs This applies to the States of Massachusetts, Connecticut and Rhode Island Dead bodies from other States must be accompanied by the sworn statement of two physicians, each of whom must be a graduate of some "legally organized medical college," and one of whom shall have been the attending physician Even this would not give very great protection in the case of dead bodies sent from Ohio, and some other States, where "legally organized medical colleges" are graduating some very disreputable persons

Table showing Location, Date of Opening, etc, of Crematories in United States

Location	Date	Number Cremated	Residents	Non residents	Male	Female	Number died Contagious Disease	Charges Dollars
Washington, Pa	1876	58	1	37	29	9	none	
Lancaster Pa	1884	89	9	80	67	22	18	50
Fresh Pond, L Is, N Y	1885	1,554			1084	470	280	25 to 50
Buffalo, N Y	1885	250	148	102	166	84		25
Pittsburg, Pa	1886	100			63	37		
Cincinnati, Ohio	1887	814	240	74	214	100	62	25
Detroit, Mich	1887	183	125	58	111	72	24	25
Los Angeles Cal	1887	182			119	63		
St Louis, Mo	1888	437	340	97	300	137	none	25
Philadelphia, Pa	1888	399	300	99	264	135	26	35
Baltimore Md	1889	84			57	27	none	40
Swinburn Island, N Y	1889	109					109	
Troy, N Y	1890	56			37	19	none	
Waterville, N Y	1891	5	1	4	1	4	none	25
Davenport, Iowa	1891	36			27	9	none	
San Francisco, Cal	1893	200			112	88	3	60
Chicago, Ill	1893	87	60	27	54	33	1	25
Boston, Mass	1893	118	100	18	59	59	8	80
San Francisco, Cal	1895	28			18	10	none	

We may now turn our attention to earth burial, with special reference to the laws and regulations governing it in the United States and Canada

The opinion is quite generally held by all classes of people, that crematories and earth burial, unless properly controlled, may become a menace to public health, and one is surprised to find that so little consideration has been given to the subject by legislative bodies In more than half of the States, beyond making provisions for establishing and maintaining cemeteries, no attention whatever has been paid to the disposal of the dead In but one or two States has the possibility of contamination of water supplies by drainage from burial grounds been considered, and few have by legislative control guarded the dangers attending the disposal of the body of a person dead of a contagious disease A permit for burial, issued only after receipt of a proper certificate as to the cause of death, is absolutely essential to prevent dangers from contagion and to avoid concealment of crime, but the great majority of our States have made no provision for this It is true that, as a rule, this measure is enforced by the local authorities in the large cities In but few States have the health authorities been given any powers to regulate the location or use of cemeteries Laws for the prevention of intramural burial have been enacted in several States, but they often fail in their purpose, the growth of cities gradually approaching and finally including the burial grounds

A few States have provided against the dangers arising from the disinterment of bodies of persons who have died of a contagious disease Three or four have regulated the depth of burial Burial within churches is still permitted in the Province of Quebec The laws of this province, however provide against a danger which has not been recognized, so far as can be learned, in any other province or State That is, permitting a body dead of a contagious disease, to be taken into a public receiving vault

The laws of Massachusetts and New Jersey with reference to disposal of the dead seem to be superior, in most respects, to those of other States A summary of these may be read, omitting, to save time, those of other States and provinces, which are included in the report

Massachusetts Boards of health may make all regulations which they judge necessary concerning burial grounds and interments within their respective limits, may close any cemetery or burial ground within the city or town they may deem necessary to protect the public health, may prohibit any person unless appointed an undertaker or otherwise authorized by the Board of Health from burying or moving a deceased person

No deceased person can be buried without a permit issued by the Board of Health on receipt of a certificate of death by attending physician or coroner. (Laws of 1885–87)

New Jersey Location of new cemeteries and extension of old ones must be approved by the municipal authorities and the local board of health, subject to revision by the State Board of Health Descriptive map must be filed with the State Board of Health. Top of outside coffin, for adults, must be buried four feet beneath the surface, for children three and one-half feet This does not apply to properly constructed private vaults Municipal authorities and boards of health are authorized to inspect cemeteries Disinterment of dead bodies is forbidden between May 1 and November 1, except for purposes of criminal investigation Forbidden at all times when death was caused by a contagious disease unless body is in a metallic hermetically sealed case, and then only by order and under supervision of local boards of health.

Cemeteries may be closed by Court of Chancery on application of municipal authorities, local or State Board of Health (Laws of 1885)

A certificate as to cause of death must be given by attending physician or coroner in all cases In cities or other local municipal government a permit to bury must be obtained in exchange for the death certificate

Local boards of health may prohibit public funerals where death resulted from a contagious disease. (Laws of 1888)

Many of the State and local boards of health have supplemented or strengthened the laws of their respective States with reference to disposal of the dead, more especially with respect to the care of the bodies of those who have died of a contagious disease

It will appear from the foregoing that our dead have been disposed of with but little control by any constituted authority, and without much attention to sanitary regulations, and yet the harm, apparently, has not been great, and perhaps none at all, except where burial was in the crowded parts of cities

There is a growing feeling that the dangers apprehended from cemeteries have been considerably overestimated Before much was known about bacterial agencies of disease, many evils which could only be conjectured were charged to cemeteries As the science of bacteriology was gradually unfolded, an explanation of how cemeteries may produce disease was afforded by supposing that the germs of infectious diseases, buried with their victims, infected the air and water in their vicinity Outbreaks of contagious disease near burial grounds were often attributed to this cause without seeking for positive proof

More recently many investigations have been made to determine the viability of pathogenic organisms in the soil, and the possibility of their infecting surrounding water and air in earth burial of the dead Koch, Kitasato, Heser, Esmarch and Petrie agree in discrediting the claims of Pasteur that the earthworm may bring the spores of anthrax, buried with cattle, to the surface and renew the disease in cattle feeding in such burial grounds Dr Petrie's experiments showed that the bacilli of cholera, and typhoid fever, when injected into animals which were killed and buried, lived but a short time Reimer's investigations in cemeteries at Jena did not show any increase of bacterial life along side or beneath dead bodies as compared with control ditches dug in similar adjoining soil Proskauer, in Berlin, met with the same results

The bacteriologic examination of wells in cemeteries has failed to demonstrate contamination A series of monthly chemic analyses of the water from the wells in cemeteries of the city of New Haven, Connecticut, were made by Dr Herbert E Smith, in 1889-90 Summing up the results he said "It would seem to justify the inference that a cemetery with a deep sandy subsoil would be very unlikely to contaminate the ground water at any considerable distance from the cemetery" This agrees with the conclusions of Professor Fleck, who examined the water from cemetery wells at Dresden

In 1875 Dr Adams, of Massachusetts, made an *exhaustive report on disposal of the dead*, which is published in the report of the Massachusetts State Board of Health for that year He said "In summing up this investigation, we can not avoid the conclusion that, so far as it goes, it shows that any injurious influence exerted upon the public health by burial grounds, as at present managed in this State, as well as throughout the United States, is almost unknown"

In spite of the lack of evidence to convict burial grounds of being a cause of disease we are far from urging that they are, under all circumstances, free from such danger We have conditions very similar to earth burial in the deposit of fecal matter in holes in the ground Bacteriologists tell us that the bacilli of cholera and typhoid fever are soon destroyed in such places, but we have many instances which seem to conclusively prove that a well near such a vault may be infected

On the other hand, one of us has knowledge of two cities built on deep beds of sand and gravel where it has been the common practice for years to construct open cesspools equal in depth to the wells Typhoid fever has not prevailed to any great extent in either of these places, and those still using well-water have not suffered more than those using the public supply, taken from another source Doubtless the character and condition of the soil largely determine the danger in such cases, and such is probably true, to a greater or less extent, in earth burial

From present knowledge we would summarize our conclusions follows

1 Cremation is to be favored as a safe and cleanly method of disposing of the dead

2 Cremation in the United States, at least for many places, needs further safeguarding to prevent concealment of crime

3 Earth burial, under proper conditions, is also a safe and satisfactory method for disposal of the dead

4 The location, preparation and use of burial grounds should be controlled by statutes, under the direction of boards of health

5 Intra-mural burial should be prohibited, and a considerable space in which there should be no burials should be provided around the outer areas of cemeteries to prevent the encroachment of dwellings

6 Cemeteries should have a loose porous soil, underdrained, and precautions be taken to protect sources of water or ice supplies from such drainage

7 Closed vaults, and indestructible receptacles or coffins for the dead, *should not be used, the* body being permitted to return to dust as rapidly as possible

8 Separate graves, with sufficient space between them, should be required

9 No one should be permitted to dispose of a corpse without a permit from a proper authority, to be issued only after satisfactory evidence of the cause of death

10 Only licensed undertakers should be permitted to dispose of the dead, and under such restrictions as may be imposed by health authorities

11 The body of a person who has died of a contagious disease should not be permitted in a public receiving vault, and public funerals in such cases should be prohibited, special precautions being taken to guard against the conveyance of contagion by those who have been associated with the deceased

PUBLIC STATUTES, AND REGULATIONS OF STATE AND PROVINCIAL BOARDS OF HEALTH IN RE-LOCATION AND REGULATION OF BURIAL GROUNDS AND DISPOSAL OF THE DEAD

United States

Alabama Physicians required to give certificates of death to the county health officers "No law requiring burial permit Most cities and towns have ordinances requiring such permits" (Dr Cochran, State Health Officer)

California The bodies of those 10 years of age and upward must be buried in graves six feet deep, of those under 10, five feet Disinterment permitted only on order of board of health, health officer, coroner or mayor, issued on certificate from coroner or attending physician, giving cause of death, etc Body must be inclosed in a sealed metallic case or coffin (1878) In incorporated cities or counties, burial permits must be obtained from the health officer or board of health issued on death certificate of attending physician or coroner (Laws of 1889)

Colorado Cemeteries located in cities, towns and villages may be vacated by order of a county court on petition of the local board of *health* (*Act* of 1893)

Disinterment of dead bodies is forbidden except by permission of the State or local board of health (Rules of State Board of Health)

In the city of Denver, death certificate is required of physician or coroner, and burial permit must be obtained from the board of health (Laws of 1895)

Connecticut Cemeteries not hereafter to be located within 600 feet of any ice pond, nor any ice pond to be located within 600 feet of any cemetery unless the ice pond is on higher ground (Laws of 1889)

No cemetery hereafter to be located within one-half mile of any reservoir furnishing a public water supply, and no such reservoir to be located within one-half mile of any cemetery Subject to revision by county superior court (Laws of 1884)

Town registrar issues burial permit on receipt of death certificate given by attending physician or medical examiner

In contagious diseases the undertaker must, in addition, give the registrar a sworn statement that the body has been prepared according to the rules of the State Board of Health (Laws of 1893)

Delaware "The bill passed by our Legislature regulating the disinterment, burial and removal of dead bodies in this State is lost, and therefore we have no law upon the subject except in the city of Wilmington" (Dr Frazer, Secretary State Board of Health)

Florida "No laws on burial, or regulating location or management of cemeteries In large towns regulated by ordinance" (Dr Porter, Secretary State Board of Health)

Rules of State Board of Health provide that dead bodies shall not be disinterred between April 15 and December 1 When dead from contagious disease not until two years after death, and then placed in a "practically air-tight case"

Illinois Trustees may decide and direct the depth that graves shall be dug (Laws of 1887)

Rules of State Board of Health prohibit public funeral when death is due to a dangerous contagious disease

Indiana "No State laws regarding disposal of the dead Burial permits only required in large cities" (Dr Metcalf, Secretary of the State Board of Health)

Rules of State Board of Health prohibit cemeteries within less than one mile of corporation limits of any town or city Require private burial (coffin to be unopened) as soon after death as possible, when death is due to a contagious disease

Iowa Municipal corporations have power to regulate the disposal of the dead Rules of the State Board of Health recommended for adoption of cities, towns and local boards of health, provide for a burial permit issued by clerk of the board of health on receipt of certificate of death by attending physician or coroner

Rules provide that disinterment shall only be permitted by authority of State Board of Health No disinterment permitted when death is due to Asiatic cholera, smallpox, scarlet fever, leprosy, typhoid (?) fever or yellow fever

Kansas Rules of State Board of Health require that in death from contagious disease the body shall be wrapped in a disinfected cerecloth, inclosed in an air-tight coffin and allowed to remain in the sick room until removed for burial Public funerals in such cases not allowed

Disinterment only on permission and under direction of local board of health

Maine Cemeteries shall not extend nearer than twenty-five rods to any dwelling house against written protest of the owner" (Dr Young, Secretary of Board of Health)

Death certificate obtained by undertaker, who presents it to the city or town clerk, who issues burial permit

Certificate is not required where it is impracticable to obtain it within reasonable time after death (Laws of 1895)

Massachusetts Boards of health may make all regulations which they judge necessary, concerning burial grounds and interments within their respective limits, may close any cemetery or burial ground within the city or town that they may deem necessary to protect the public health, may prohibit any person unless appointed an undertaker, or otherwise authorized by the board of health, from burying or moving a deceased person

No deceased person can be buried without a permit issued by a board of health on receipt of a certificate of death by the attending physician or coroner (Laws of 1885-87)

Michigan The trustees of any incorporated village, or council of any city, may cause any cemetery to be vacated when it endangers the health of the people living in its vicinity, but not during the months of June, July, August or September (Sec 4790 of the R S)

No person dead of any dangerous communicable disease may be brought into any township, city or village, without a special permit from the board of health or health officer, and under the health officer's supervision (Laws of 1895)

Minnesota Physicians are required to report to local boards of health the death of any of their patients who shall have died of a contagious disease within twenty-four hours thereafter

Corpse shall not remain unburied longer than four days, or if death is caused by contagious disease not longer than twenty-four hours after death, without permit from local board of health If death is due to a contagious disease the said board may cause the body to be disinfected, and tightly sealed in a coffin, which shall not be opened Funeral in such cases must be private (Laws of 1883)

Nevada It is unlawful for an undertaker or other person to bury any deceased person who has died in any incorporated town or city in the State without having first obtained a certificate from the attending physician or coroner This permit, before burial, to be returned to the coroner of the county where the deceased died

County commissioners may authorize disinterment of dead bodies when, in their judgment, it will not endanger the public health, provided the person to be disinterred did not die of a contagious or loathsome disease (Laws of 1865)

New Hampshire No cemetery shall be laid out within twenty rods of any dwelling house, store or other place of business without owner's consent (Chapter 51, Sec 2, R S)

Cause of death must be certified to by attending physician "No dead body may be buried without a permit In cities no permit issued till application has been passed upon by the board of health" (Dr Watson, Secretary of State Board of Health)

New Jersey Location of new cemeteries and extension of old ones must be approved by the municipal authorities and the local board of health, subject to revision by the State Board of Health Descriptive map must be filed with the State Board of Health

Top of outside coffin, for adults, must be buried four feet beneath the surface, for children, three and one-half feet This does not apply to properly constructed private vaults

Municipal authorities and boards of health are authorized to inspect cemeteries

Disinterment of dead bodies forbidden between May 1 and November 1, except for purposes of criminal investigation Forbidden at all times when death was caused by a contagious disease unless the body is in a metallic hermetically sealed case, and then only by order and under supervision of local board of health

Cemeteries may be closed by Court of Chancery on application of municipal authorities, local or State Board of Health (Laws of 1885)

A certificate as to cause of death must be given by attending physician or coroner in all cases In cities or other local municipal government a permit to bury must be obtained in exchange for the death certificate

Local boards of health may prohibit public funerals where death resulted from a contagious disease (Laws of 1888)

New Mexico Municipal corporations may establish and regulate cemeteries within or without corporation, may cause cemetery to be removed and prohibit them within one mile of corporation (Laws of 1884) Burial prohibited within 250 yards from either side of a river or stream (Laws of 1889)

An act of 1889, appointing boards of health, forbids carrying a contagious corpse through streets or roads, or into any church with coffin open and body exposed "This was a common practice with the Mexicans, even in smallpox " (Dr Atkins, Secretary of Territorial Board of Health)

New York Local boards of health are required to "prescribe sanitary regulations for the burial and removal of corpses "

The undertaker is required to secure a certificate of death from attending physician or coroner, and must present this to the local board of health to obtain a permit for burial or removal (Laws of 1893)

The Board of Supervisors of any county may make such regulations in regard to burials as the public health may require

No cemetery shall be located within less than 100 rods from any dwelling, without the owner's consent (Laws of 1854)

North Dakota "No law regulating location or use of cemeteries except that bodies must be buried with four feet of earth on top of the coffin " (Dr Montgomery, State Superintendent of Health)

Corpses must be buried within four days after death, and where death was due to a contagious disease, within twenty-four hours after death, except by permission of the local board of health In contagious diseases the funeral shall be strictly private, and only such hearses or other vehicles shall be employed in the removal of the body as may be authorized by the board of health

Undertakers are required to have death certificate from attending physician or undertaker, which he files with the board of health after burial of the body (Laws of 1893)

Ohio Cemeteries not permitted to be established within 200 yards of any dwelling house, unless owner consents In enlarging a cemetery it shall not be nearer than 100 yards to any dwelling house erected subsequent to the location of the cemetery (Laws of 1891)

Disinterment of dead bodies prohibited from April to October, and at all times when death was due to a contagious or infectious disease (Laws of 1894)

Villages shall not have the power to prohibit interments in any cemetery in their limits unless it can be shown that such interments are detrimental to the public health (Laws of 1889)

The erection and maintenance of crematories authorized, but their use prohibited nearer than 300 yards to any dwelling house without owner's consent (Laws of 1893)

No person is permitted to remove or convey a corpse for burial to or from any city, village or township, without a permit from the local board of health (Laws of 1893)

Rules of the State Board of Health prohibit public funerals in deaths from contagious disease, prohibit disinterment of corpse without a permit from that Board

Oklahoma Territory Rules of Territorial Board provide that no cemetery shall be located nearer than one mile of any town, city, or source of any public water supply or water works

Disinterment between December 1 and April 15 on permission of the local board of health indorsed by Territorial Board

Bodies dead of a contagious disease can not be disinterred until three years after burial unless the burial grounds in which they are placed should become a menace to public health, and then only by consent of local and Territorial Board and under supervision of the local board

Public funerals prohibited when death was due to a contagious disease

Pennsylvania Unlawful to bury the dead in land draining into any stream furnishing in part or in whole the water supply of any city Not applicable to land now used for burials (Laws of 1895)

Cremation of a dead body forbidden without a permit from the health authorities of the place where the body is cremated Permit only granted on presentation of death certificate from attending physician or coroner, signed by undertaker and person in charge of the crematory

Rules of State Board of Health prohibit public or church funeral in death from contagious disease Prohibit exhumation between May and October, and in case of contagious disease only by permission of and under conditions imposed by the State Board of Health

Tennessee No law on the disposal of the dead other than one prohibiting burial within municipal corporations or taxing districts containing 36,000 population

"Most cities and towns have ordinances requiring permit for burial " (Dr Lindsley, Secretary State Board of Health)

Texas "Burial regulated by local authorities Permit for burial required in every community " (Dr Swearingen, State Health Officer)

Vermont In establishing or enlarging burial grounds they must not be within twelve rods of any dwelling house, and remains must not be buried within twenty rods of such house (Laws of 1878)

Private burial required immediately after death of any person dying of Asiatic cholera, smallpox, typhus fever or yellow fever (Laws of 1892)

Rules of State Board of Health require private funeral where death resulted from a dangerous contagious disease

Virginia Cemeteries prohibited from being established within the limits of any incorporated city or town, or within 400 yards of any residence without consent of the owner

Washington Rules of the State Board of Health require interment within twelve hours after death in case of smallpox, and private funeral in all contagious diseases

West Virginia "No laws or regulations regulating disposal of the dead No permit for burial No special rules for prevention of contagion in connection with disposal of dead bodies " (Dr Baker, Secretary State Board of Health)

Wisconsin Cemeteries may not be established within one mile of any erected building within the limits of any recorded plot in any city or village, nor established outside any city or village within 200 rods of any inhabited dwelling in any recorded plot in any city or village, without the consent of the municipal authorities in such city or village (Sec 1454 Laws of 1887)

Certificate of death required of attending physician "Not enforced outside the city of Milwaukee" (Dr Wingate Secretary State Board of Health)

Rules of State Board of Health require burial within twenty-four hours after death when due to a contagious disease

Canada

Manitoba The Provincial Board of Health is authorized to provide rules for the safe and speedy interment of the dead, and conduct of funerals for the prevention of contagious disease

Attending physician required to notify the health authorities of deaths caused by a contagious disease

New Brunswick Rules of the Provincial Board provide for private funeral where death is due to a contagious disease Body to be disinfected, to be inclosed in a metallic or air-tight coffin which must not be re-opened Coffin not to be taken into any church

In cities and incorporated towns, permit for burial must be obtained, which is issued only on satisfactory statement of cause of death, etc

Nova Scotia No law on the disposal of the dead, other than ordinary cemetery regulations

No special rules of Board with reference to burial in contagious diseases

In city of Halifax, death certificate and burial permit required (Dr Reid, Secretary Provincial Board of Health)

Ontario There are no laws relating to the burial of the dead except those which govern cemetery companies, and those which relate to the burial of contagious corpses Proposed regulations for burial and transportation, are still under consideration by the Government (Dr Bryce, Secretary Provincial Board of Health)

Quebec Cemeteries located by diocesan authorities on request of their parishoners Must be as far as possible beyond probable limits of town or village, on elevated land inclining opposite to the town or village to prevent contamination of drinking water

Disinterment of dead bodies permitted on order of Judge of Superior Court, but not more than one body at a time, between June 1 and September 1

Where death is due to contagious disease, disinterment permitted only after five years, or such time as may be fixed by the Provincial Board of Health

Superior or diocesan ecclesiastical authority may prohibit interment in any cemetery or church

Bodies may be interred in church if coffin is covered with four feet of earth, or placed in stone vault eighteen inches thick, or brick twenty inches thick, disinfectants to be used in the coffin

Where death is due to contagious disease, church interment or vault deposit is prohibited Bodies must be in separate graves with four feet of earth over coffin In non-contagious diseases three feet of earth permitted Interment in private vaults—in contagious diseases—permitted if body is in hermetically sealed coffin

Provincial and local boards of health may prohibit dead bodies being taken into a church during an epidemic of a contagious disease on written permission of a local or diocesan ecclesiastical authority (Chapter XLVIII as amended)

Except in cases of suspicious cause of death, for which coroner's permit is required, all permits for disposal of the dead are given by the clergyman of the deceased's denomination (Dr Pelletier, Secretary Provincial Board of Health)

In the following States and Territories no laws could be found which in any way relate to the sanitary aspect of the disposal of the dead Alabama, Arizona, Arkansas, Delaware, Florida, Georgia, Idaho, Indiana, Indian Territory, Kansas, Kentucky, Louisiana, Maryland, Mississippi, Missouri, Montana, Nebraska, North Carolina, Oregon, Rhode Island, South Carolina, South Dakota, Texas, Utah, Washington, West Virginia, Wyoming

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ON THE DISPOSAL OF THE DEAD, WITH SPECIAL REFERENCE TO THE PREVALENT PRACTICE OF EMBALMING

Read before the American Public Health Association

BY A WALTER SUITER, M D

Ex President Medical Society State of New York, Fellow of New York Academy of Medicine, etc
HERKIMER N Y

From remotest antiquity to the present time, topics relating to the disposal of dead bodies have been universally interesting No subject has been more carefully considered from all points of view, and yet it is not inconsistent with facts to state that no material advancement as to methods of preservation or final disposition has been made over those which were practiced more than twenty centuries ago Indeed, there is a growing belief in the public mind that to return to the custom generally in vogue previous to the Christian era (cremation), would solve many perplexing problems with which sanitarians are not unfamiliar

Anciently, in Egyptian countries where the surrounding atmospheric conditions were favorable, the dead bodies of human beings were embalmed and the mummified remains indefinitely preserved The Jewish nations entombed their dead in rock-bound receptacles called sepulchers In Greece and Rome the practice of cremation obtained, while it appears that we probably owe to the ancient Chinese the origin of the common method of the present date, viz that of interment or earth-burial

For ages this absorbing subject has been surrounded, modified and in various ways influenced among people of all classes, conditions and climes by vexatious questions relating for the most part to sentimental, religious, sanitary and medico-legal considerations

It will be the purpose of this paper, in the briefest manner consistent with intelligent description, to invite the attention of this body to some questions which have especial reference to the two last named considerations

According to early chronologic records, no branch of art was cultivated in higher degree than that of the embalmment of the Roman corpse Affection and superstition, always the greatest motive powers of the world, together with the prevalent fanciful ideas of death and subsequent everlasting life, all combined to give the greatest prominence to the extraordinary, elaborate, and costly methods which were employed in the remote periods of civilization for the preservation of dead bodies, in order that they might be kept uninterred As to means and methods, they were chiefly evisceration and cleansing, salting and bituminizing, the insertion in the emptied three great cavities of antiseptic balms and spices, desiccation by favorable atmospheric surroundings and the subsequent bandaging with expensive muslin and linen fabrics, painting, gilding and marking of the hermetically sealed cases provided for their final reception—all of which consumed a period of time amounting to seventy or seventy five days The final result of this process of mummification was to render the body as inoffensive in a sanitary sense as a block of wood or stone, and specimens of the remains of ancient kings and noblemen have been discovered and are on exhibition who lived and flourished at various epochs from 1,000 years before the time of Christ, when the opposition of the priests inhibited the custom and caused the complete decadence of the art and its consequent abandonment, until the discovery of the circulation of the blood suggested an easier, less costly and quicker method for the accomplishment of the desired purpose

The great anatomist and surgeon, William Hunter, in the latter part of the eighteenth century, practiced the injection of essential oils through the principal arteries for the preservation of anatomic subjects, but it was not until about the year 1835 that antiseptic solutions were used in this manner for the purpose of embalming, when the custom was inaugurated, simultaneously it is said, by Drs Lauth of Strasbourg, Franchini of Naples, and Gannal of France Various substances were then used, as chlorid and sulphate of alumina, arsenic, zinc and mercury—the preservative powers of which had been established Since that time to the present date nearly every substance known to have properties in any degree antiseptic when applied to animal tissues has been used for the purpose, and it would be quixotic to attempt the enumeration of the various formulas which have been from time to time proposed It is perfectly proper to state, however, that taking the customs and achievements of the people of ancient times in this regard for a standard, the modern practice of embalming has been steadily retrograding in skill and usefulness by being placed, without legal control or restriction, almost entirely in the hands of the ordinary undertaker, who is ignorant in most instances of the principles involved The practice of injecting the blood vessels has undergone of late a degenerative change As a consequence of the hasty and superficial manner in which this operation is now performed, circumstances are too frequently encountered which are a menace alike to the welfare of society in general and to public sanitation, and it is the special purpose of this paper to call attention thereto, with a view to securing the indorsement of this great and influential organization to the effort which has been and is being made in the State of New York to regulate the practice by legal enactment, to be followed, it is hoped, by every other State in the Union

I presume there are very few men of experience present who will not join me in asserting that the method of embalming at present in use by the so-called funeral director, is not worthy of the name It may be briefly described as follows theoretically, and practically, in some cases, one of the principal arterial branches of the body (usually the brachial near the elbow bifurcation) is exposed and laid open with questionable skill, and a variable quantity of one of the innumerable fluids (which almost invariably contain in composition one or more or all of the preparations of mercury, arsenic, zinc and carbolic acid) is pumped by means of a syringe into the artery, supposedly in a direction that the blood naturally flows

More often, and almost invariably in remote districts, this process is carelessly modified, so that the operation consists in simply pumping the liquids into the thoracic and abdominal cavities through a trocar, and also by means of rubber tubing into the rectum and *per oram* into the stomach It is supposed that the result of this is to preserve the body in a sanitary and presentable condition for ceremonial purposes previous to burial There is little doubt that if the proper injection of the blood vessels is carefully done with the required anatomic skill, such a result could be achieved with satisfaction, but it is obvious that when done in the incomplete and unscientific manner just referred to, the preservative effect is almost, if not quite *nil*, and if it were not for the ordinary precautions commonly practiced by the friends of the deceased themselves, the corpse would in most instances become a public nuisance in high degree before the final disposition

The growing tendency to this careless and superficial treatment on the part of the undertaker, without legal regulation to obviate it, is the doorway to an enormous and systematic deception—a commercial fraud, in fact, as a comfortable fee is charged for the service To illustrate, I will not attempt to burden my remarks by citing numerous examples, which might readily be done, but will simply mention one familiar case which is well in point, because it was an instance where inutility was abundantly demonstrated when every facility was offered and the conditions were unusually favorable I refer to the notable case of the late General Grant, whose lamented death, although for a long time previous an anticipated event, was a national calamity It would naturally be supposed that in such an instance extraordinary precautions would be taken to preserve the remains for the elaborate and extensively planned ceremonies incident to the occasion, and presumably the body was embalmed, and doubtless with the best skill obtainable A few days later, when the funeral train reached Albany on its way from Mount Macgregor to the final resting place at now famous Riverside Park, a countless multitude of interested and admiring people were shocked to observe that no semblance of the well-known features of the distinguished military chieftain was recognizable Suggillations, together with many other evidences of rapidly advancing decomposition, were apparent, in spite of the fact that diligent effort was made to conceal them There can be no doubt that the public health was in great degree endangered by the unpleasant circumstances

This is typically illustrative of frequent occurrences of the kind in common observation, and I am led thereby to feel justified in declaring that there is a strong argument apparent herein in favor of legislation of such a character as will lead, at least, to the modification, if not the prohibition of the so-called embalming process, which in a great proportion of instances neither accomplishes the intended purpose to prevent putrefactive changes with their attendant odors and appearances, nor properly conforms to the common principles in public health administration.

The other phase of this subject, to which I desire to call attention, might with propriety be said to deal rather with *public morals* than with *public health*, but it seems that no apology is due for the reference, as those two titles so closely merge into each other in practice as to suggest that the medico-legal aspect comes properly within the scope and purview of the fundamental principles of this organization.

A case which I here quote from one of my previous papers[1] will also serve as a type in illustration.

> Mr. E. A. P., a medicine vendor, aged about 75 years, a short time after marrying his third wife died with somewhat obscure symptoms after an illness of seven days. Some time after his burial, suspicion was aroused on the part of his relatives that his death was not the result of natural causes, and an investigation was instituted. I was employed by the authorities to exhume the body and ascertain, if possible, the actual cause of death. The body was found to be partially decomposed. The viscera of both the thoracic and abdominal cavities was carefully removed and properly prepared for subsequent chemic analysis, with a view to the establishment of the presence of poisons.
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> The analysis demonstrated unmistakably the presence in the materials examined of arsenic, mercury and zinc in large and lethal quantities. About this time I was informed in a casual manner that the body had been embalmed by the undertaker who had charge of the interment and, upon inquiry, it was ascertained that such was the case. The body had been treated in the following manner. A so called embalming fluid was injected into the principal artery of both arms, and openings were made into the thoracic and abdominal walls through which a quantity of the same liquid was thrown into each of these great cavities. Inquiry was made of the manufacturers of the liquid as to its composition. They admitted that it contained in solution the chlorid of zinc and bichlorid of mercury, but denied the presence of arsenic in any form. A sample of the fluid was then procured and analyzed. The analysis revealed that it contained, beside other unimportant ingredients, the very salts and compounds found in the remains—those of arsenic, mercury and zinc—the revelation of, and testimony upon which, together with other suspicious facts were to be relied upon by the prosecuting officers to constitute the *corpus delicti* in the action. It was therefore impossible to determine whether these poisons were introduced into the body before or after death and, for obvious reasons, the case was dismissed from the courts in consequence, although after a subsequent careful re examination of the suspected tissues by cutting them into fine pieces and repeatedly washing them in chemically pure water until all traces of the poisons were lost in the washings, and the remaining substances after being dried and analyzed still showed the presence of the metals mentioned, thus indicating probable ante mortem absorption, no chemist would dare to express a positive opinion that, beyond reasonable doubt, the case was one of ante-mortem or post-mortem poisoning.

This is a striking example of cases which have been occurring in great numbers in recent years and are at present increasing in frequency. I do not hesitate to venture the opinion that there is no chemist of any considerable medico-legal experience who has failed to meet with similar instances, and the subject is now receiving the careful attention of many lawyers, judges, physicians, prosecuting officers and, to some extent, legislators, with a view to the enactment of such laws relating to the disposal of dead bodies as will insure proper protection in this respect and meet, at the same time, the requirements of sanitation, with due and proper regard for the demands of sentiment.

The menace to the welfare and safety of the public is apparent in the premises indicated in this case, and I feel sure that its various relations will be at once appreciated.

It seems that no one can fail to observe the opportunity offered herein, to a criminally disposed individual, to commit and subsequently cancel the crime of murder by poisoning—it simply being necessary that he should make sure that the body of the victim is treated in the manner referred to. That this opportunity is frequently taken advantage of at the present time is a well-known and indisputable fact among those of us who are concerned in such investigations, and I might consume the entire time of this session by reference to cases of such character which have come within my knowledge during several years past, and while the subject of relative legislation has been pending in my State.

Obscurity of symptoms leading to confusion as to diagnosis, lack of suspicion, together with the fact that the perpetrator is frequently able to control the extent and character of the medical attendance, the ease with which a careless and inefficient undertaker may be procured to make himself, unwittingly, a *particeps criminis*, all combine to favor the accomplishment of a criminal purpose, especially if it is the result of intelligent design as is generally the case.

It is a remarkably suggestive fact in this connection that between the years 1858 and 1892 not a single case of murder by poisoning was tried in the courts of the great city of New York. Is it reasonable to suppose that no such murders were committed in that city for a period of about thirty-five years? The statistics of London and Paris showed an average of three such cases yearly during that time. It will be observed that in consequence of this pernicious practice of embalming it is just as difficult to establish the *innocence* as the *guilt* of persons who may be accused.

By the toleration of the law, or the want of specific legal direction, this practice of alleged embalming has come to be an enormous offense to the public health and to certain other public interests, and the subject is worthy of the most careful attention. Ignorant men are taught, or teach themselves to believe, that the injection of a quantity of irritant metallic poisons in solution into the interior of the body anywhere is sufficient to effect preservation and secure their fee, and embalmment *secundum artum* is now practically fast growing to be a thing of the past in this country. Gallons of poisonous solutions are pumped into bodies indiscriminately, which are in an incredibly short time imbibed by other bodies in cemeteries, saturate, and are absorbed, by contiguous soils and streams, and also wells that are fed by subterranean waters which receive the percolations of graveyards filled with bodies thus treated. For example, a recent examination of the waters of Scajaquada creek which flows through Forest Lawn Cemetery in the city of Buffalo demonstrated the presence of considerable quantities of arsenic of the kind commonly used in the prevalent method of embalming.

In the belief that hasty treatment is necessary to obtain the preservative effect of the arsenical solutions, now universally employed, the undertaker, in the absence of proper legal requirement to the contrary, seldom awaits the issuance of the death certificate, and I am rarely called to make an autopsical examination that I do not find that his operation has preceded and in fact superseded mine.

The movement for the purpose of bringing about controlling legislation in these circumstances began in 1888 and was the outcome of a paper which the writer had the honor to read before the Medical Society of the State of New York. A bill with prohibitive provisions was introduced into the Legislature with the approval of the State Society, and its Committee on Legislation was directed to use all proper means to effect its passage. This bill was violently opposed by the State Undertakers' Association and persons engaged in the manufacture and sale of the objectionable solutions used. Although the praiseworthy object of the measure was so far appreciated by the legislators that it was passed in an unusually rapid manner to an advanced parliamentary standing, the opponents by superior political tactics succeeded in preventing its being placed upon its passage and it accordingly died, for that session, in the committee room. The public attention was attracted to the proposition, however, and favorable efforts were at once undertaken by many eminent persons who readily recognized the importance of the subject, including judges, health authorities, lawyers, chemists and physicans.

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[1] Transactions Medical Society of State of New York. 1888.

Two years later, another bill was introduced in the form of an amendment to the penal code. This was not so sweeping in character as to the prohibitive restrictions of the former bill, but permitted of embalming by "the injection of any substance into the body only with the written consent of the attending physician and of the coroner having legal custody," prohibited "the injection of or placing upon the body of any solution containing arsenic, zinc, mercury or carbolic acid, except in cases of persons dead from contagious diseases by officers of boards of health, or for the preservation of bodies for dissection in legalized medical colleges."

This bill was actively advocated by a large number of the friends of the reform, and able addresses were made at the hearings by Professor Withaus of New York, Hon. Tracy C. Becker, the President of the State Bar Association, Professor Doremus, Hon. Clark Bell, Judge Brady and others. The bill was favorably reported by the committees of both Houses to which it was referred, but owing to the vigorous efforts of its opponents in the lobby it failed of passage, thus demonstrating once more the truth of the expression so familiar to sanitarians that "politics and science do not live upon the same street."

The measure has since been pending and it is understood that a renewed and determined effort to correct the evil will be made during the coming winter with great prospect of success, as the sanitary phase of the subject has become so apparent by the abuse of the practice previously referred to, that a general regulation of the disposal of dead bodies is believed to be most urgently demanded.

The fact that this Association has very pertinently established a standing committee for deliberation upon topics relating to the subject under consideration is regarded by the friends of this reform as a very favorable circumstance, as it is believed that all the associated important and vexatious questions relating thereto will be considered from all points of view, in connection with the work of the committee, and that without doubt the potent influence of this great organization may be secured to bring about the enactment of laws with uniformity of requirement, covering the preparation for burial, cremation and transportation of all dead bodies. These laws should have an intra-State, inter State and international character, and I beg to remark that the Association could not at the present time lend its powerful aid to a project of vaster or more salutary importance to the public weal.

I trust sincerely that I have succeeded by this hastily prepared paper in presenting the legislative part of my subject in a sufficiently comprehensive manner, so that the way may seem clear to a formal reference to the committee, with instructions to report a formula of indorsement to be acted upon by the Association at this meeting.

I have thus far said nothing concerning the innocuous substitutive methods which might be proposed to remedy the great evils which it has been the purpose of this article to expose. The argument most commonly advanced by the so called funeral directors in opposition to the passage of the restrictive acts proposed is that they should not be compelled to submit to the hardship of relinquishing the use of the arsenical fluids which have been depended upon so long, when no efficient substitute can be proposed. Every chemist present knows that such an argument can not be sustained. The truth is that it is the *cheapness* of these mineral substances in solution which chiefly recommends them for this purpose. These fluids are supplied for, not to exceed 30 cents per gallon by the manufacturers, and it is the interesting difference between the cost of one or two gallons hastily thrown into the mouth and rectum (as is now the almost universal practice of the ordinary undertaker) and the probable $30 fee that furnishes the motive for such an argument.

I am sure that every scientific gentlemen of experience in this audience will join me in the assertion that at least a score of substances might be mentioned as substitutes which have far greater preservative power than the mineral substances now in use. The cost would doubtless be greater in the case of most of them, but in view of the importance of the subject, the slight reduction in the profits of the undertaker would, I think, be tolerated by the public. Even this objection would in due time be adjusted by commercial competition and the relations of demand and supply. It must constantly be borne in mind, however, that no substance, whether miscellaneous or otherwise, would properly meet the sanitary requirements of the occasion that is not properly applied by its scientific introduction and distribution throughout the entire circulatory system of the body, and what is aimed at in the proposed restrictive law is to make it a penal offense to do anything short of it, along with certain specifications of the materials which shall be used.

It seems apropos to call attention at this point to a recently devised burial casket which is designed to meet some of the objections which can sanitarily be urged against most of the receptacles now made use of for transportation and burial. It is the invention of Dr. J. P. Hill, of Buffalo, and is constructed entirely of glass with a tapering circular opening at one end only. An end piece with grooved edges is fitted and made fast to the open end. In lieu of a description I will pass a perspective and diagram view of the instrument which I have obtained from the inventor, and which will convey an excellent idea of its apparent merits. The caskets will weigh from twenty to sixty pounds according to size.

It may be claimed for it, and I believe not extravagantly, that it is superior because it is cheap, light and durable, that it can be completely disinfected without trouble and can be made absolutely air- and gas-tight, that the body may be preserved for ceremonial purposes and transportation a reasonable time without embalming, that it prevents saturation of the soil and pollution of the atmosphere in the vicinity of cemeteries, protects the remains from action of soil, water, worms, etc , and that it may be cremated with the corpse

It appears that this would solve the problem presented by the paper of Dr Griffith at the Montreal meeting, as there would be no possibility of contagion from it and it is cheap enough to be within the reach of all classes

In conclusion, permit me to state that the principal propositions for which I contend in the foregoing remarks are as follows

1 That the scientific preparation of dead bodies has degraded in recent years, to the extent that the prevalent system as now carelessly practiced by the majority of undertakers is inefficient, and in many instances unsanitary

2 That it constantly leads to complications in criminal prosecutions, and entirely precludes the possibility of accurate medico-legal investigations—thus constituting a menace to the welfare of society

3 That salutary and non-complicating substitutes for the materials employed are available, and that thereby the abuse of the embalming process may be entirely and satisfactorily corrected

4 That the great importance of this subject merits the careful attention of this Association through its Committee on the Disposal of the Dead, and that proper legislation for restriction and control should be earnestly demanded in the interest of public sanitation and the public weal

A CASE OF QUADRUPLETS

BY FRANK A STAHL, M D

DEMONSTRATOR OF OBSTETRICS, RUSH MEDICAL COLLEGE, FELLOW CHICAGO GYNECOLOGICAL SOCIETY CHICAGO

A case of quadruplets occurring but once in 350,000 to 400,000 births, where there was no trace of heredity, where labor, with the exception of rupturing the membranes, was normal, where, notwithstanding the plural fetuses, none presented in a manner compromising the delivery of the other The interesting, theoretical, as well as practical study of such a case as a whole possesses sufficient intrinsic value to warrant even a superficial presentation of the case The case occurred at home under poor circumstances, unfortunately away from the advantages of a maternité and a couveuse, and was attended by a midwife I saw the case upon the third day

The husband, Patrick C , is a laborer, aged 32 years, a native of County Mayo, Ireland His height is 5 feet, 11 inches, weight 190 pounds Physically he is well developed There is no trace of multiple pregnancy in his line

The wife, Catherine C , is aged 33 years, a well proportioned woman, 5 feet, 8 inches in height, and weight 180 pounds, also a native of County Mayo There are no anatomic deviations apparent in her development, there is no trace of hereditary multiple pregnancies in her line Her previous labors, all normal, were as follows

1 - Para Partus maturus, child now 12 years old
2 Para Partus immaturus, child dead
3 Para Partus maturus, child now 8 years old
4 Para Partus maturus, died, 2 years old
5 Para Partus maturus, now 4 years old
6 Para Partus maturus, now 2 years old
7 Para Partus prematurus, the present quadruplets, all dead

Antelabor Period —She noticed with some degree of anxiety her unusually (for that period of pregnancy) large abdomen, but as she continued able to be about thought that things must be as they should be, though toward the latter days of her pregnancy she entertained some suspicion that there might be more than one intrauterine Also toward the last, a tendency to swollen limbs (pressure obstruction) was noticed, but never to any serious extent, otherwise nothing of any moment presented during the pregnancy On Monday, Sept 30, having just passed the eighth-month period of pregnancy, Mrs C accompanied her little boy to the dispensary to have a scalp wound dressed As the surgeon removed the dressings, catching sight of the bloody bandages and of the wound, she fainted and fell to the floor I could not elicit whether in falling she fell with abdomen to the floor or with back to the floor After recovering she made her way home, riding a part of the way That Monday evening and next Tuesday morning she felt very faint and tired, and toward Tuesday noon she experienced a slight bearing-down pain At irregular periods she continued to feel the slight bearing-down pains until the noon of Wednesday when, as she states, real labor pains commenced

The Labor —Wednesday, Oct 2, 3 P M, the first neonatus, vertex presentation, was delivered, the second, breach presentation, followed about 4 P M , the third, breech presentation, about 5 P M , the fourth, also breech presentation, following at about 6 P M With the fourth neonatus came the mass of secundines There was no hemorrhage of any consequence Allowing for the fear and dread of the parturient and the Teutonic excitability of the midwife under the circumstances, I gather from the description received from both mother and attendant that the deliveries were without difficulty and all spontaneous, with this exception that the attendant found it necessary to rupture each sac as it came down, stating that the membranes were unusually tough This toughness of the membranes and their artificial rupturing is often mentioned in the histories of these cases It would seem one of nature's methods of throwing around each fruit a greater safe-guard, a stronger protection than usual, to assist, perhaps, in preventing so far as possible a "conflict of the fittest"

The Secundines —As stated, they came away with the fourth neonatus as one mass The placental mass was made up of four small placentæ united by membranous tissue, each had its cord, and a characteristic amnio-chorionic membranal sac Unfortunately I could not persuade the midwife to disgorge the placenta, but the above is what I gathered from the mother and the attendant before the latter's cupidity was aroused

The puerperium passed without any noticeable feature

About four weeks' post-partum she attended mass, walking to the church Upon her return she complained of weakness and dizziness, followed, soon after she retired to bed, with a severe uterine hemorrhage, which was soon stopped The occasion offered me the coveted opportunity to examine the pelvis and uterus The examination yielded a wide, roomy, normal pelvis with a single normal uterus, at that time slightly subinvoluted, normal adnexa To day she is about and well with her 180 pounds, actively engaged in selling negatives of her quadruplets They are very poor

Observation of the illustration and a comparison of the figures show a perfect and singularly symmetrical development of the neonati Examination determined no abnormality in their development as malformation, defects, excesses, etc The three to the left, James, Patrick and Bridget, died the next morning between the hours of 9 and 12 A M Catherine, the little one, with dress turned under, was alive when the exposure was made, but died that evening about 78 hours post-partum They were all viable, and had I seen the case early enough I would have employed the couveuse, unfortunately, when I did arrive three were dead and the fourth moribund

5 That one or both ovaries may cast off a single or a double ovuled follicle at or about the same time

It is not difficult to conceive how, in the anomalous case, this latter unilateral or bilateral plural rupture of Graafian follicles may occur

As a determining factor in the development of pluriparous conditions, not only is the histological structure of the ovary, that is, one follicle containing one ovule or one follicle containing two ovules, of much importance, but also, I believe, and of not less importance, is the state of the sympathetic nervous system, since according as its sensibilities are, so will it reflect the exciting causes to which the organism may be exposed, and so proportionately in dignity will be the effect upon the ovary (and system generally) and its expression In the usual case there is but a single impregnation, but in the exceptional case, and this is not merely a conception of the imagination, the exciting agent may be so continuous and possess such activity as to call forth on the part of the organism an extraordinary expression—a *delirium eroticum*, as it were—during which, or soon following and induced by it, a maturing follicle or follicles is caused prematurely to rupture in the presence of one that has already ruptured and been impregnated, this second product of ovules is also impregnated, thus superimpregnation will have been occasioned

JAMES PATRICK BRIDGET CATHARINE

QUADRUPLETS, PARTUS PREMATURUS—EIGHT MONTHS

Neonatus	Name	Weight	Length	Cir O F	Lived
1	James	2.5 pounds	15 7 inches	10 75 inches	16 hours
2	Patrick	3 5 pounds	16 5 inches	11 5 inches	17 hours
3	Bridget	2 75 pounds	16 inches	10 5 inches	18 hours
4	Catherine	3 pounds	16 5 inches	11 5 inches	78 hours

Theory—Many theories have been advanced to explain the origin of multiparous pregnancies, and not a few ingenious ones too, in which it is readily seen that the imagination and fancy play quite a prominent rôle It would entail too great an expenditure of the reader's time and patience were the attempt made to present even a hasty resumé of the long list of theories extant It were best to be original, so far as possible, and leave the reader to pursue comparative research as time and inclination may desire

It is generally admitted that pluriparous pregnancies may obtain where any of the following conceded conditions may be present, namely

1 That one ovule may contain two germinal spots

2 That one Graäfian follicle may contain two ovules

3 That more than one follicle may rupture during the same ovulation

4 That ovulation, Graafian follicle rupture, may occur in the presence of pregnancy

Superimpregnation is the impregnation or fecundation of two or more ovules at one time, or about the same time, in contradistinction to *superfetation*, which is the impregnation of a second ovule when the uterus already contains an ovum which has arrived at a considerable degree of development That superimpregnation occurs in the exceptional case, there is no doubt The present case of quadruplets is such a case Its analogy occurs as the usual, the normal in some forms of the lower animals

That superfetation may and does occur is doubted by many, and especially by Auvard, who argues that it is only possible (a better word perhaps would be "probable," as all things are possible in nature) in a case of a double uterus or ectopic gestation From observations made in some of my own biparal cases, where there was no doubt as to the single character of the uterus, where gross inequalities in growth and development in the living as well as the dead would, among other considerations, strongly suggest unequal periods of continuity of existence, and in one case particularly, added to this evidence of the neonati, was the statement of the mother, a very intelligent woman, that she was afraid lest a pluriparous condition obtained as she had experienced that "caught feeling" a second time, a feeling not altogether one of pain and recognized by not a few women In view of such observations it would not be difficult to "believe in the reality of superfetation," contra Doléris This belief is further strengthened in the fact that "the same woman giving birth to twins bearing evident traces of being the offspring of fathers of different races" (Playfair), and again in the many illustrations that may be followed in the lower animals These views are strongly in line with the thought expressed by Darwin, who recognized what he so aptly terms "the similarity existing in all nature"

But to return to our quadruplets As brought out, heredity played no part as a causative factor, nor did a double uterus The case is one of superimpregnation, the impregnation of four ovules most probably at the same time, that is *simultaneous superimpregnation*, or, the impregnation of four ovules within a very short space of time, that is, *immediate successive superimpregnation*

As to the origin of the four ovules, either—(1) four follicles furnished each one ovule, (2) two follicles furnished each two ovules, (3) one follicle furnished two ovules, and two follicles furnished each one ovule they may have been expelled from one or both ovaries, most probably from both

That the quadruplets is a case of superimpregnation and that *four* ovules were impregnated is corroborated by numerous circumstances

By reference to the photograph and to the accompanying figures, it will be noticed that (*a*) the striking equality and symmetry of countenance, growth and development bespeak a common starting point, (*b*) the fingernails and length, which are of more importance than the weight in determining a case of this kind, are in each indicative of an eight months, as estimated by the mother, fetus, (*c*) there is a perfect formation of each fetus, there are no deformities of any kind, as malformations, excess or absence of toes, fingers, etc

By reference to the secundines, it may be noticed that though there was a single mass of placental tissue, it was made up of four separate subplacentæ, united by a membranous union, each subplacentæ had a single cord The mass of membranes was made up of four separate sacs with charactesistic amniochorionic membranal development To have four characteristic chorions there must have been four ovules, since the zona pellucida furnishes the external of the three elementary layers forming the mature chorion

Columbus Memorial Building

Dear Doctor —Please direct the attention of your friends to *our* JOURNAL We will be pleased to send sample copies to any names you may suggest

INHERITED PECULIARITIES

BY J SANDERSON CHRISTISON, M D

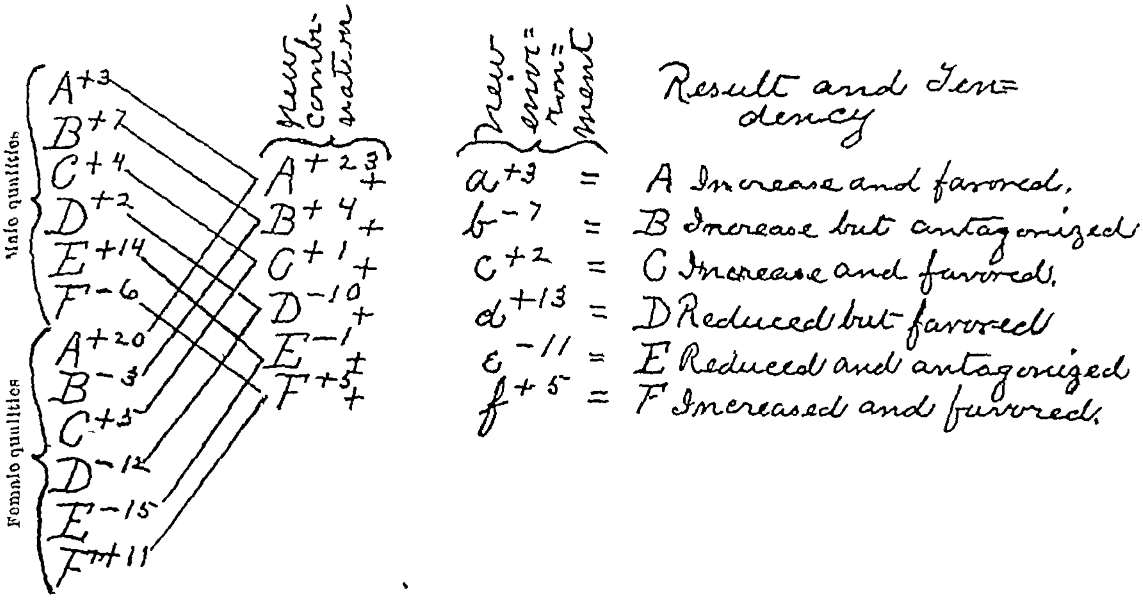
CHICAGO

Physical features and moral and mental qualities of parents are so commonly observed in their children that nobody questions their being inherited, that is, they are recognized as "chips of the old blocks," and we are not surprised when the children bear an almost precise resemblance in every essential feature to one or other parent But when a parent has a peculiarity of a decidedly irregular or abnormal form which is passed to the child, or if it should entirely fail to appear, the question is at once raised as to how that happens, what laws explain the result We observe disease conditions passed to offspring as well as uncommon features, and which, if not strictly speaking inherited, are somehow due to the circumstances of birth It is not generally considered by the medical profession that diseases, as we commonly know them, are directly inherited, but that a tendency or special defect, a susceptibility or fitting quality is, and which renders the offspring all the more likely to be influenced by the peculiar circumstances of birth, especially the moral and physical atmospheres created by the parents and which give direction to the final outcome of disease and tending to carry them along the lines eastablished in the parents

But exactly what the fundamental law of heredity is remains unsettled, and probably will be so for some time to come, both from the lack of sufficient facts and the undecided question as to the limitations of a species But as like causes operating under like conditions must produce like results, it becomes evident that events, so to speak, striking the lines of growth and conformity at all angles of incidence and varying momenta, which, could they be measured, would express their resultant by a parallelogram of forces Everything in nature is under law, and all laws are mathematically precise

But to illustrate, we will represent some of the qualities or characteristics of parents by two groups of capital letters having numerals with + and — signs attached The letters will stand for a typical degree of a personal quality, or the amount that would balance in a well-proportioned individual, while the numerals will indicate how much above or below a typical degree the qualities are Thus, by taking a number of the same qualities, talents or peculiarities in both parents and combining them, the result will appear a compromise product in the offspring, as is illustrated in the quality of skin in the combination of negro and white, and which will have to compromise with its surroundings—its new environment Let the small letters represent particular conditions surrounding the offspring—forces in its environment and indicate by attached numerals whether they are favorable or unfavorable to the new combination and to what extent The accompanying example will indicate the problem

It will be seen in this example that neither parent has the same quality in the same degree, and that some qualities prominent in one parent are deficient in the other But a deficiency or condition below par is an abnormal condition, and if both parents have a deficiency of the same quality the offspring will have an intensified morbid disposition or a malformation The same rule will apply to qualities above par in degree, but the process of extension or reduction is limited both by environment and a self-limiting property—a specific quality essential in the specific group, the *number, nature* and *order* of properties in any living individual and by virtue of which the laws of affinity and association insure the preservation and continuation of specie character If this was not so there would be no limitation to divergence from type and no stability to organized forms But this theory, although one of special creation, does not clash with evolution in nature, but assumes that changes in the progress of nature have paved the way for the birth of a new form of life introduced in the course of cosmic progression and dated by an epoch-making catastrophe But the germinal essence—the differentiating and character-preserving power, although not produced or created by what we commonly regard as purely physical forces, is yet both made possible and conditioned by them In other words, a kingdom has been prepared for a king


Male qualities
Female qualities
A+3
B+7
C+4
D+2
E+14
F−6
A+20
B−3
C+3
D−12
E−15
F+11
new combination
A+23 +
B+4 +
C+1 +
D−10 +
E−1 +
F+5 +
new environment
Result and Tendency
a+3 = A Increase and favored.
b−7 = B Increase but antagonized
c+2 = C Increase and favored.
d+13 = D Reduced but favored
e−11 = E Reduced and antagonized
f+5 = F Increased and favored.

But to return to our equation, which, though fragmentary, is representative as far as it goes, we may suppose the capital letters as each representing not one quality but a group of qualities supporting one characteristic, for owing to the interdependence of the parts of an organism this must be the case Then, as all qualities are represented by energies in their last analysis, and as energies have both transmutability and selective affinities, it is evident that the variations of environment in the course of development would have such an effect on the order of a group of qualities as would, to some extent, account for the rise or fall of an ancestral characteristic For example, $A+3$ representing the eye in the male as being rather better than common, and $A+20$ representing the eye in the female as being markedly superior to common we might expect the offspring to inherit eyes even superior to those of the mother, and which may be the case, but not always, for some will inherit eyes quite inferior This can only be explained by the fact that the eye represents many energies, part of which have become transmuted or transposed by selective affinity instituted by the new relations—the change of combination and other circumstances

Again, let $E+14$ represent a markedly superior power of reasoning in the male, and $E-15$ a markedly deficient power of reasoning in the female, we would naturally expect to find the offspring quite ordinary in this particular, but instead of which a superiority may result or even imbecility may appear But the power of reasoning depends more on the relative fullness of all the other qualities of the individual than on any one portion, so that the energies which give it basis are so numerous and varied that the influences of circumstances will be the least likely to affect this faculty

Having thus indicated how qualities are transmitted from generation to generation or apparently buried to reappear in a third or fourth generation, we may now notice a few of its practical illustrations If we glance at the various races of man we observe not only distinctions in physical forms but a prevalent or characteristic difference in moral and mental conditions, and we will also observe that those that have mixed most with the world, present the highest degree of civilization This would indicate that exclusiveness begets evils which preclude the attainment of the highest civilization The exclusiveness exercised by royalty in requiring its members to marry within a very limited circle of choice, is likely the cause why it has shone so little in the fields of science, art, poetry or invention, and for that matter statesmanship And this, notwithstanding almost all its members have been in the most favored position to exercise their talents under every advantage

Exclusiveness has illustrated its effect on the propagation of cretinism by increasing it most in those settlements most isolated from the world, and thus forcing inter-marriage But wherever these settlements have been opened up by the advances of civilization, cretinism has largely disappeared

Another marked illustration of the effect of exclusiveness was shown in the old village of Ines in France, and which was isolated by a barren territory and bad roads to such an extent as to compel intermarriage, and it is said that almost all the inhabitants had six fingers on each hand But after free communication was established with the outside world, this peculiarity soon died out in the subsequent generations Thus it is seen, that the principal of "Free Trade" in marriage is a safeguard against the deterioration of family stock and the only exclusiveness permissible with safety is that in the course of natural selection or in the just exercise of personal liberty

When we consider the persistence of qualities it is obvious that the racial or historic comes first, then community, family and individual in due order Many individual peculiarities inherited are very remarkable, as in the case of a slight accidental mutilation in a parent being represented in the same location in the child by a malformation But mutilations are rarely inherited, although malformations arising in the course of development sometimes are Defective eyes, slowly arising, are strongly hereditary, and it may be laid down, as a rule, that the closer the defective organ is associated with the brain the more likely is the defect, if it has been slowly acquired, to be transmitted in some form or other to the offspring One case will suffice to show how a constitutional defect in a parent will display itself in different members of the same family The mother had been confined to bed for several weeks with a peculiar nervous malady, but which was not correctly diagnosed until a physician from a distance was called, who was also requested to examine other members of the family—aged from 19 to 35 and five of them in all Their troubles were all chronic and quite different One had periodical headache, one had epileptic fits, one had spells of pugnacity, one had periodical neuralgia, and one had periodical attacks of gloom It was evident the main cause of them all was inherited defects, making different manifestations by virtue of a difference in the number, nature and order of experiences in the different individuals, and the conservative forces of nature had not been permitted to operate above the maternal level so as to eliminate the inherited evil

SOCIETY PROCEEDINGS

Chicago Pathological Society

Regular Meeting, Oct 10, 1895

Weller Van Hook, M D, President, in the chair

Dr Eliza H Root reported a case of

CELOSOMUS, VARIETY, SCHISTOSOMES RECOVERY

Celosomic fetuses are described as "Single monsters, characterized by a more or less complete eventration of the genito-urinary organs and various viscera The entire contents of the abdominal cavity may be found in a pouch, the walls of which are formed by the cord There are usually present in addition anomalies of the limbs, and the sex is usually female" (Charpentier) Charpentier, with Hirst and Pierson, follow Saint-Hilaire in distinguishing cases where the monstrosity is limited to the abdomen and cases where it extends to the thorax, and separates them into varieties

1 Aspalosomes where there exists lateral or median eventration at the lower part of the abdomen, the urinary, sexual and intestinal system opening externally by three separate orifices, the situation of which are not normal The genito-urinary organs are atrophied or absent Monsters of this variety, born alive, quickly die

2 Agenosomes where the organs of generation and urination are absent or rudimentary The anus is found in front where the external genitals should be Abdomen and thorax normal

3 Cyllosoma where there is a lateral eventration at the inferior portion of the abdomen and absence or lack of development of the pelvic limb of the same side

4 Schistosomes where there is lateral or median eventration throughout the entire extent of the abdomen, pelvic limbs absent or ill-developed The abdominal wall is replaced by a thin membrane through which the visceræ may be seen This variety is very rare (Saint-Hilaire and Charpentier)

From the available literature I find on the subject, I am inclined to think that modifications in degree of this variety are not so very unusual The case that it is my privilege to report I have placed under this variety as it seems to differ only in degree from the description of *schistosomes* The remaining two varieties, pleurosomes and kelosomes, involve the inventration of the thoracic visceræ, lateral or median, with absence of the thoracic limb on the cleft side Cases belonging to schistosomes I find reported under various headings Exomphalismus—"The whole contents of the abdominal cavity were outside the body" (Simpson of Edinburg) "The opening in the abdomen is about 1½ inches in diameter, and to right of cord attachment Through the opening protruded a sac, composed of amnion and peritoneum, and containing the intestines, liver and stomach" (Fritt's and Simpson a similar case) "The anterior aspect of the abdomen was covered by serous membrane only when "In both groins were a diminutive penis and scrotum" (Brown)

Ectopia abdominalis is a term under which several cases are reported, the descriptions corresponding with those under schistosomes "Abdominal cavity was open from sternum to pubes, the liver and intestines exposed and outside the body" (Kennedy) This author states other complications were present but does not particularize "There was a large tumor on the right side of the body, extending from the lower margin of the ribs to the crest of the ilium and from the median line in front to the axilliary line, and containing the liver, stomach and intestines" (Dr N Montgomery Jacobus reports a similar case) "Male born at full term, opening extended from epigastrum to left of iliac fossa, with protrusion of abdominal viscera" (Chas D Roe) "A case born at eight months, umbilical cord 2½ inches in length, protrusion of abdominal viscera complete, both feet clubbed" (Hawkins, Shattock and Herrigoyen report similar cases) Simple descriptions without any attempt at classification, characterize the reports of several cases, as 'A large tumor of abdomen, covered by a thin transparent membrane" "A tumor or opening extending from ensiform cartilage to within an inch of pubes, visceræ plainly visible" "The child presented a large eliptical opening three inches in length and two and one-half inches wide, through which protrued the whole of the small intestines, the stomach and right lobe of the liver" (Buchanan)

Matzdorf, of Berlin, reports one case as gastrocele, another as ectopia abdominale, and accounts for the abnormality as failure upon the part of the abdominal wall to unite, through the arrest in the development of the amnion and peritoneum A case of extrophy of the abdominal viscera in a phocomelus fetus is reported (John Collins) Three cases of extrophy abdominalis are reported in which the abdominal cavities were so contracted that reposition of the viscera was impossible (Stanton, Pichand and Laeconche) The children died soon after birth It is not stated if they were born at term or prematurely Extrophy abdominalis is not confined to single monsters Wands and Van Henkelen each report extrophy abdominalis in thoraceopagus, and Letitia Westgate a case of xiphopagus, born at the fifth or sixth month of gestation, which had a sac that contained all the abdominal viscera There was but one umbilical cord and the feet were clubbed This later case has all the characteristic s of a true schistosomus, except that it is a double monster

I find but few recoveries recorded one is a spontaneous recovery "A case of hernia of the abdominal wall, three inches in diameter, into which when the child cried a considerable portion of the intesties was forced The child lived and the skin gradually grew over the transparent covering" (J Tracy Simpson) Peritoneum in all probability lined the amnion in this case

"A tumor at the umbilicus, the size of an adult fist, containing omentum and intestines Parts successfully restored by operation" (Barton) Probably a case of hernia funiculi umbilici I find but two recorded cases of recovery The majority of the reports are silent as to recovery or death taking place Dorsett operated on a case unsuccessfully

In reviewing the cases that I find reported, incompleteness greatly mars their value for statistics or instruction in obstetrics But we do learn that other deformities of the body, other than the cleaving of the abdominal wall, are usual, that but few recoveries take place and only in cases where the opening is not more than three inches in diameter, that hydramnion is usually present, and delivery liable to be premature Dr Simpson, of Edinburgh, in the report of his case calls attention to several peculiar facts 1, labor premature, 2, altitude of infant, the trunk being curved backward and to the right side, instead of the normal forward curve of the body, 3, malposition, transverse, with presentation of the visceral mass One observer states that out of fifteen cases of exomphalismos (schistosomes) presentation of the abdomen was met with in thirteen Time of delivery not mentioned

In my own case labor was normal, time premature one month, with an uneventful lying in The mother, primipara, blonde, aged 24, entered the hospital in labor and was delivered five hours after entering by Dr Isabella Herb, interne Position, second presentation, vertex, occiput anterior The babe weighed seven pounds, fairly well nourished but debilitated The abdominal wall presented an eliptical opening, three inches in length by two and one half in width The cord was situated near the inferior left border of the opening, enclosed by the expanded end of the amnion of the cord No other deformity of the body appeared The kidneys and bowels performed their functions normally The child took the breast well but did not apparently gain in strength The temperature rose with the appearance of a ring of inflammation about the border of the cleft The abdomen became swollen and tympanitic, indicating the probable presence of peritonitis Beneath the transparent covering patches of lymph were visible The child was so weak an operation seemed unwise as it could only hasten the inevitable On the fourth day after birth, about the time for the normal falling of the cord, rupture of the membrane seemed imminent On the fifth day, when the dressings were removed in Dr D W Graham's surgical clinic in the woman's medical school, the dreaded event occurred The stomach, liver and intestines were protruding Dr Graham brought the edges of the opening together, after replacing the viscera, while the baby was under an anesthetic, as the doctor claimed "to make the baby decent for burial " The infant was returned to the hospital ward still sleeping On waking it took nourishment and early in the evening passed a loose, green colored stool Temperature 102 4 degrees F The day following, morning temperature 6 A M, 103 8 degrees F, M, 105 degrees F, 6 P M, 104 degrees F, after which temperature fell to 101 degrees F and then normal, varying from day to day, dressings removed on the fourth day after operation, all the sutures suppurating and part of them had pulled out of the tissues, evidently from tension The edges of the abdominal walls varied from one half to three eighths of an inch apart, space filled in with lymph stained with fresh bile, loosened stitches removed, wound cleaned with bichl hydrarg sol 1 2000, wound redressed with gauze and roller bandage which was soon stained through with bile[1] For several days the bile continued to escape freely and the child seemed in imminent danger of dying from inanition, the temperature, falling to 96 degrees and 97 degrees F Gradual contraction of the opening continued, and just as a fatal termination seemed imminent a change took place The bile flow decreased, the points of suppuration began to improve, the child rallied and progressed toward perfect recovery Twenty six days after birth and twenty one after the operation the child was dismissed from the hospital with instructions to return for redressings for supporting the weakened abdomen The opening was entirely closed, a linear scar one to one and one-half inches long remained The child grew well and strong and was soon lost sight of

DISCUSSION

Dr D W Graham—Mr President, I have just arrived and did not hear all of the report There is very little to say about it from my standpoint except that it is *one of those* cases that surprise us sometimes The case was brought to me in order that I might demonstrate congenital umbilical hernia to the class When the clothes were removed the intestines were lying on the surface of the abdomen The opening was very large At the time I regarded the case simply as one of congenital defect in the abdominal wall The intestines were soiled with fecal matter and urine and gathered up with dirty hands as there was no time for preparation They were restored within the abdomen with great difficulty and sutures inserted for the purpose, as Dr Root said in her report, "of giving the child a decent burial " That was the idea at the time, but I was glad to learn at the end of a week or more that the child was recovering

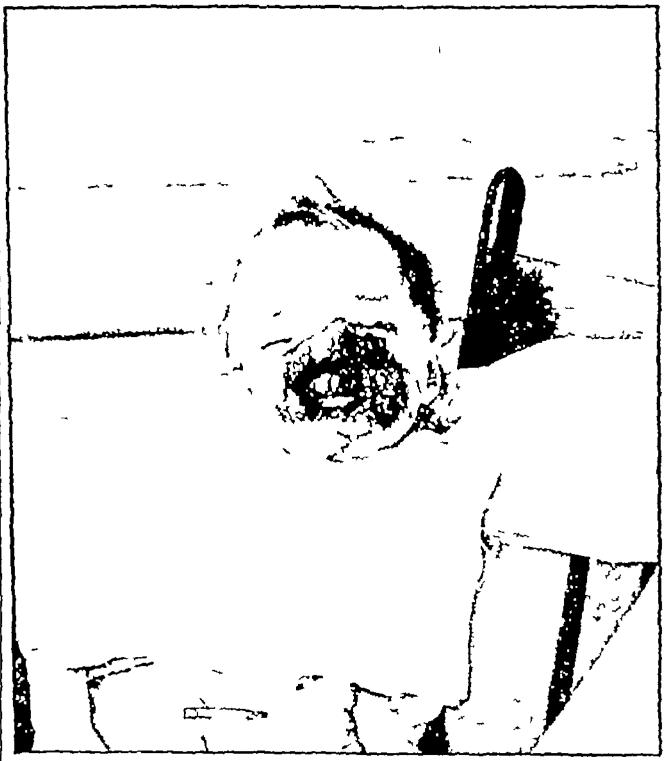
The opening required six or eight sutures, and before the last two or three were tied the abdominal cavity was flushed out hurriedly with warm sterilized water

Dr D D Bishop, Attending Dermatologist, and **Dr Lawrence Ryan**, Resident Physician, Cook County Hospital, Chicago, presented a paper entitled—

NOMA AND ALLIED DISEASES OF THE MOUTH A REPORT OF THREE CASES, WITH PATHOLOGIC EXAMINATION

The cases we have to report consist of one which was clinically noma, and two that belong more properly to the so called stomatitis ulcerosa The patients were brothers, all of whom had recently recovered from measles

Case 1 *Noma*—A S, male, white, aged 18 months, came to the hospital Feb 2, 1895 The patient was removed from the Home for the Friendless where, with his brothers he had passed through his late illness On entrance the child was considerably emaciated Skin milky-white, warm and dry Lies quietly on his back, eyes nearly closed A mucupurulent discharge escapes from the eyes Pulse very rapid, respirations shallow and accelerated Of most importance is the local condition, which is as follows The upper lip, tip and margin of the nose for a distance of one-quarter inch are covered by a thick, hard, black crust, which extends in a curved direction from the tip of the nose to the angle of the mouth on either side The lower lip shows no external evidences of disease The upper and lower left incisors and canine teeth are gone and the molars are quite loose The alveolar processes on the left side are denuded of gums and periosteum The sockets of the absent teeth are plainly visible Much the same condition exists on the right side The tissues of the *floor* of the mouth are gangrenous, but the tongue is not involved The soft tissues of the entire palate may be stripped off in shreds Upon removing the necrotic tissue more of the superior maxilla became visible, denuded of its periosteum The inter-maxillary suture was softened so as to allow of movement of the separate bones The lower jawbone was not involved but there were linear ulcers along the line of junction of the lip and gum The nasal septum was visible The necrosis advanced rapidly, so that at the time of death, which occurred forty-four hours after entrance to the hospital, nearly the whole nose, the cheeks on both sides to a point midway between the ears and mouth and a large portion of the chin were involved The temperature during this time ranged from 102 to 104 degrees F, pulse 150 to 160, and very weak, the respirations were



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[1] I am unable to account for the discharge of bile There might have been some faulty development of bile ducts or injury to gall bladder

from 40 to 60 per minute No autopsy was permitted Some of the tissue was excised for histologic examinations, and cultures were prepared The treatment employed was removal of the necrotic mass, cauterization with strong nitric acid, and antiseptic applications were freely used , liquid diet and strychnin or other stimulants internally

Case 2 Stomatitis Ulcerosa—F S , male, white, aged 3 years Was admitted to the hospital Feb 25, 1895 General condition is that of a healthy child The patient had entirely recovered from measles about three weeks previously, but had suffered lately with sore mouth, accompanied by fever and general indisposition Examination of the mouth shows an ulcer one half-inch in diameter on the external surface of the upper lip to the left of the median line small linear ulcers are situated along the margins of the gums and incisor teeth, both superior and inferior , a round ulcer one-half-inch in diameter is seen beneath the tip of the tongue, and a small superficial ulcer on the inner surface of the left cheek, this is three quarters by one-half inch in diameter , a similar ulcer in the corresponding situation on the right cheek , the floor of all the ulcers is covered by a grayish necrotic slough , there is slight enlargement of the cervical lymphatic glands There was some elevation of temperature, rapid pulse and respiration for the succeeding four days, when they became normal and remained so Local treatment consisted of cauterization, cleanliness and the use of antiseptic washes freely applied The patient -improved rapidly and was discharged eighteen days after entrance entirely well

Case 3 Stomatitis Ulcerosa—C S , male, aged $4\frac{1}{2}$ years Entered the hospital March 2, 1895 Had been treated for measles and considered well four weeks previously The child seems quite well, except for ulcerations of the gums Ulcers are to be seen about the left lower molar teeth, and quite marked ulcerations about all the teeth on the left side of upper jaw The child suffered in no way, except for the local condition Under treatment similar to that employed with his brother recovery took place in the course of ten or twelve days

Cancrum oris, as defined by Starr,[2] is a gangrene of the mouth, beginning on the gums or the inner surface of the cheek, spreading with great rapidity and destroying every kind of tissue upon which it develops

The various authors who have written on the subject agree as to the nature of the disease, but show some difference of opinion as to the starting point of the affection Thus, Bohn,[6] Echorst,[4] Osler[3] and Ziegler say that noma of the mouth begins either in the mucous membrane of the gums or cheeks Billroth describes it as a gangrenous nodule beginning in the middle of the cheek, while Moullin says it sometimes begins in the mucous membrane, but more often in the submucous tissue near the orifice of Steno's duct Fagge[2] believes the gangrenous process begins in the inside of the cheek, always in the submucous tissue, and rarely starts in the gums

The different authorities differ again as to the relationship existing between ulcerative stomatitis and cancrum oris Bohn,[6] Keating,[1] Starr[2] and Osler[3] consider them under separate headings, while Eichorst[4] and Ufflemann speak of them as a single affection Bohn, however, distinctly says that ulcerative stomatitis may be the beginning of a cancrum oris

Predisposing Causes—Cancrum oris usually occurs in children between the first and second dentition Several cases have been reported of late, however, in adults[5] It is more often seen in hospitals and public charities than in private practice Eichorst speaks of it as occurring frequently in barracks Both sexes are attacked nearly equally Thus, Relliet and Barthez[6] report 183 cases, 63 of which were in girls

As to climate, it is seen most in temperate and cold-temperate regions, especially in the northern seashores It is not limited to the cooler localities, however, as Galloway[7] speaks of it as of frequent occurrence in Mexico, and cases have been reported from India It is said to be more common in large cities than in the country The cold and damp weather of spring and autumn seem to favor its development

More than one half the cases follow measles, but cases are reported of association with other infectious diseases, as pertussis, scarlatina, typhoid and typhus fevers It is often seen in association with malaria, particularly in the northern countries, Komorowski[8] having found the plasmodia in the blood of more than one-half of the twenty-three cases reported by him It is often a complication of diseases in which cachexia or marked anemia are present Finally, it is needless to say, that the disease is most frequently seen among patients whose surroundings are unhygienic and whose personal habits are uncleanly

As to the pathology of cancrum oris, the clinical picture speaks for a progressive inflammation and the histologic investigations seem to warrant this interpretation Bohn[6] describes the microscopic changes in the gangrenous tissue as consisting of molecular necrosis of the tissue elements, large or small drops of fat crystals, triple phosphates, derivatives from the blood, coloring matter and bacteria The bones die as far as the periosteum is destroyed , this is usually superficial, but at times the whole thickness of the jaw becomes disorganized The vessels are unaffected, except in the necrotic tissue itself, where they are thrombosed The vascular changes are therefore of a secondary nature The gangrene may remain dry but is usually moist The visceral changes are inflammation and gangrene of the gastro intestinal tract, pleuritis, lobular pneumonia and gangrene of the lung, hydrocephalus and thrombosis of the cerebral sinuses

The pathologic investigations of our cases consisted of cultural examinations, inoculations of animals and histologic sections

Case 1 Cultures—The cutaneous surface soon after death was burned, incised with a sterilized knife at the border of the gangrenous tissue, and cultures made from below the skin on 5 per cent glycerin agar-agar After incubating, the growth developed as a pure culture of an organism showing the following characteristics 1 In tubes kept at 37 degrees C , fine white deeply-situated colonies about pin point-sized were seen after two days. Though kept under observation for several days there was no increase in size above that described 2 White transparent superficial colonies, pin-head-sized, with a denser white pin point-sized area in the center Under low power these appear of deep brown color in center and grow paler and thinner toward the edge , the edges are finely dentated , the surface is finely granular and broken by fine lines and furrows radiating from the center

The growth on slant of agar-agar was white, shining, presenting a translucent surface and extended three sixteenths of an inch to the side of the line of inoculation The edges were irregular, being both finely and coarsely dentated The organisms as seen in the hanging drop were rather short bacilli, non-motile and were frequently seen lying end-to end The were often collected into small clumps and but rarely single

Staining Properties—With gentian violet anilin water these bacilli stain uniformly and intensely The ends of some are pointed, while others show an expanded (pear shaped) end , others again are curved With Loeffler's alkalin solution of methylene blue they stain more intensely in segments, the ends usually more deeply and the central portion faintly Gram's stain was also successful

The growth on slants of 5 per cent glycerin agar-agar showed fine white globules size of a large pin head and becoming slightly confluent The organisms reacted to stain in a manner identical with those described from plain agar-agar On gelatin at room temperature a very slight white growth appeared which caused no liquefaction Bouillon was rendered cloudy in twenty-four hours at 37 degrees C , while the growth settled to bottom of tube after forty eight hours Potato inoculations showed an almost invisible growth Litmus milk gave no perceptible change in color no coagulation There was no gas production with glucose and lactose agar

Cultures on Loeffler's blood serum mixture, kept at 37 degrees C , gave a white growth in twenty-four hours Preparations stained with Loeffler's alkalin solution of methylene blue showed bacilli larger than those from the cultures on agar-agar with pointed or rounded ends, often irregular in form and staining irregularly The individual and staining popularities were exactly like those of the diphtheria bacillus grown in the same medium

Inoculations—1 A rabbit, two-thirds grown, was inoculated subcutaneously at the base of ear with 4 c c of a two days' old incubator culture in bouillon The only noticeable effect was slight swelling for twenty four hours

2 A full-grown guinea pig was inoculated subcutaneously in the abdominal wall with $1\frac{1}{2}$ c c of a forty-eight hour old bouillon culture , some local swelling followed and the animal was sick for two or three days Recovery took place quickly and the animal remained well As the pig was old and therefore less susceptible to the diphtheria bacillus the degree of virulence, if we are dealing with that organism, was necessarily hard to determine

Case 2—Surface cultures from the ulcers showed a bacillus which was in all its morphologic and cultured popularities the same as that described in Case 1 Cultures made on Loeffler's blood serum mixture corresponded, as did those in Case 1 in every way morphologically and in staining properties to the diphtheria bacillus Besides this organism the staphylococcus pyogenes aureus was present

Inoculations—A guinea pig weighing 520 gms received subcutaneously in the abdominal wall 3 c c of a twenty four hour old incubated bouillon culture Aside from the production of a local swelling and being sick for a few days no effects were observed

Case ,—Inoculations on cultures taken from the surface *of the ulcers several days after the local antiseptic treatment* had been instituted gave only the staphylococcus pyogenes aurens, and the staphylococcus pyogenes

Hystologic Sections—A piece of the buccal wall from the case of noma was removed just after death, cut so as to include some of gangrenous and adjacent normal tissue, partially hardened in Möller's fluid, finished in alcohol, coated in colloidin and stained with hematoxyllin and eosin Examined with the low power the greatest extent of necrosis is seen to be on the mucous surface, here the epithelium appears as a granular mass staining deeply with *eosin and* showing only a few fragments of nuclei, the submucous connective tissue, muscle and mucous glands are seen as necrotic remains, also diffusely stained with eosin Here and there, both upon the surface and deeply seated in the necrosed tissue, islands of irregular shape, staining with the hermatoxyllin are seen, these, under high power, appear to be made up of *microörganisms* The necrotic zone is succeeded by tissue more nearly normal, and just at the border *line between* the two zones there is an extensive leucocytic infiltration As one observes the border of the section away from the point at which there is absolute necrosis it is noticeable that the superficial epithelial cells are entirely gone as deep as the retemucosum, while at a greater distance the loss is *less and less until finally*, at quite a remote distance the normal layers of cells are preserved Corresponding *with this* gradual distruction of the superficial epithelial layers the migration of leucocytes becomes less and less as we pass away from the necrosis The blood vessels are dilated and often plugged with leucocytes

Sections stained by Gram's method showed deeply situated *in the necrotic zone* numerous bacilli quite closely packed together These organisms are about twice the length of the tubercle bacillus, rather slender, thicker in the middle portion than at the ends The ends are rounded *in* some instances, but pointed in others The bacilli appear like a pure culture and *stain best just at the point where* the necrotic zone blends off into the inflammatory tissue Sections stained *with Loeffler's* methylene blue shows a bacillus in the same situation and morphologically the same On the surface of the necrotic border some of the same organisms are seen and in addition numerous large bacilli and micrococci

The observations *concerning the essential* etiology of noma have been few Up to quite recent times but little was done toward determining the real cause, the conditions which favor its development alone being described Bohn[6] in his classical description of the disease describes many bacteria in the sloughing border but assigns *no* special significance The authorities to-day are inclined to the belief in a specific cause at *work upon* a well prepared soil The frequent occurrence of the disease in public institutions and the apparent preference for localization upon the mucous membranes of the different openings of the body suggests a *microbic* origin

Previous to Lingard's[9] contribution to the *subject in* 1888, no definite organism having anything like a constant relationship had been described He *found* an extensive growth of a thread like organism 4–8 micromilimeters long just at the line of extension of the necrosed tissue Cultivations and subsequent inoculations into animals gave rise to appearances precisely similar to those seen in the original disease, and in the heart muscle necrotic foci and *clusters of* a thread-like organism with a surrounding inflammatory zone were discovered The intermuscular *fasciæ* were also infiltrated with the same bacterial growth None were found, however, in viscera of the *human* subject dead from *noma* Lingard recovered this organism in all of his five cases He claims an identity between it and one found in ulcerative stomatitis in calves

Schimmelbush[10] previously described an organism quite like the one seen by Lingard, found in the same *situations*, which grew on gelatin Inoculations in rabbits gave rise to abscesses In 1890 Grawitz[11] found in sections at the line of living and dead tissue many bacilli which grew out into long threads The absence of micrococci and thick bacilli, which are usually seen in such necrotic tissue when exposed to the air, made it appear to him that only a single species of organism was at work No cultures were made Loeffler, *in discussing Grawitz's paper, remarked that the microscopic picture, including the zone of organisms* resembled that seen in mouth diphtheria of the calf

Masterman[12] in 1891 found micrococci in the lymphatics of one of his two cases Cornil and Babes have found short *streptococci and rods, and Ranke found the same strepto*coccus described by Koch as producing progressive necrosis in field mice Rabbits in which tissue was implanted, died

Bartels[13] in 1892 described in one of his two cases a slender bacillus in the gangrenous tissue and at autopsy the same organisms in the kidneys, lymph glands, spleen and heart muscle These stained with Loeffler's blue and showed spore formation

In 1893 Elder[13] found long bacilli running to a point in the tissues, cultures were unsuccessful, and Barnabei[14] found the staphylococcus pyogenes aureus in a case of *noma* with septico pyemia Foote[15] in the same year made bacterio*logic examinations from the surface of sloughing* tissues in a case of cancrum oris but only micrococci were found He implanted pieces of the slough into the subcutaneous abdominal tissues of rabbits, but in the abscess formed only the ordinary pyogenic organisms were found The animals recovered His sections made from the skin covering the malor bone, showed numerous bacilli measuring 2½ to 3½ micromillimeters often joined end to end and in long strings, situated just at the border of the necrotic zone, next to the inflammatory zone Cover glass preparations from the surface of the slough showed micrococci and a few bacilli The blood in his case was that of an ordinary secondary anemia

Siegel,[16] in 1894, in an article entitled, "The Identity of Cancrum Oris in Man, and Hoof and Mouth Disease of Cattle," describes a short bacillus, (0 5 to 0 7 *microm*) This organism stains deepest at the ends, is immotile, and grows on gelatin without liquefaction It also grows on potato, blood serum and bouillon Gram's stain was unsuccessful It was pathogenic to doves, cattle and pigs

Sansom,[18] in 1878, described certain moving bodies *in* the blood of a girl aged 4¼ years, the subject of noma These were granules and numerous small refractile bodies, showing rapid locomotion and resembling octahedral crystals They were most numerous at the height of the temperature and became aggregated into zoogloea masses Sansom did not find these in all the cases and he is inclined to believe the bodies were non-virulent organisms growing in the blood derived from the gangrenous area Osler thinks they were bloodplates Morse[19] has confirmed Sansom's observations No etiologic significance can very well be attached to these bodies

Reviewing these reports then, we find the most constant organism and the one to which the most presumable etiologic importance may be attached is a long bacillus growing in threads and end-to end, deeply situated in the necrotic *zone, near the* unaffected tissue In Lingard's five cases these were recovered in the cultures, proved pathogenic to rabbits and again found in the tissues of the dead animals Schimmelbush also cultivated his on gelatin and produced abscesses in rabbits Foote's cultures were all unsuccessful but the organism described by him located in the tissues seems quite similar to those of Schimmelbush and Lingard

Cultivations were also successful in Siegel's cases, but the organism differed from the others in being much shorter Cultivations were unsuccessful with the other observers The organism recovered by us in cultures, certainly presents all the characteristics of the diphtheria bacillus except its effect upon guinea pigs, *to which it* was only slightly virulent Objections might be made, therefore, to calling it the Löffler bacillus *While* there is good reason for such objection, the organism corresponds as closely to all the requirements as do those that have been found in throats of patients either having a pseudo-membrane or in which no clinical evidence of diphtheria were present, which have been described as "diphtheria *bacilli* with reduced virulency" The absence of the pseudo-membrane should in no wise be held as against the presence of the diphtheria organisms, for have not diphtheria bacilli often been found in situations where the deposit was entirely absent? We therefore feel justified in placing our cases upon record as additions to those such as lacunar tonsillitis, fibrinous rhinitis, otitis media, vulvitis, glossitis, *gingivitis*, and wounds[20] in which diphtheria bacilli were found, but lacking in clinical appearances

As to the morphology of the bacilli found in the tissues, one can only say that they resemble the diphtheria organism as generally seen in exudates

There would seem, therefore, to be no similarity between the organism found in cultures and tissues by us and those described by other observers For they on the one hand, found bacilli growing in long threads and end-to end, while those seen by us were short, straight, curved and pear-shaped In considering this apparently wide difference one must not forget the wide range of forms taken by the bacillus diphtheriæ as one observes the growths upon different media and under different degrees of temperature Further, Klein[21] has demonstrated the diphtheria bacillus growing in long threads with granular swellings and knob-like terminals in the tissue of a cow inoculated with human diphtheria bacilli He also observed all the stages of development from the ordinary forms as usually seen, up to the long thread-like forms These observations of Klein may be looked upon then at least, as evidence that the organism in tissues may assume a growth similar to the thread-like filaments found by Lingard and others These facts will scarcely warrant any conclusions as to the identity of our organism with those of other observers, but might be looked upon as a possible connecting link between those widely different forms

We can not refrain, in conclusion, from drawing attention to the probable identity of cancrum oris and ulcerative stomatitis Such a statement seems warranted by the observation of three cases all in the same family, following the same disease, showing distinctly different grades of development from the mild ulceration to profound gangrene, and in two of these the demonstration in cultures of the same organism

We wish to thank Dr George H Weaver for all of the bacteriologic examinations, also Dr J W Walker for photographs of the fatal case, and Dr E H Ochsner for clinical notes on one of the cases of ulcerative stomatitis

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DISCUSSION

Dr Ludvig Hektoen—I desire to call attention to the great similarity between some lesions described in connection with noma and what is observed in connection with true diphtheria of the skin, of which there are now several undoubted cases on record, in which the diphtheria bacillus has been demonstrated by means of cultures and animal experiments

The Doctors' Club

At the regular monthly meeting of the Doctors' Club of Chicago held at the Chicago Beach Hotel, Oct 25, 1895, the subject discussed was " the Dispensary Evil "

Dr Marcus P Hatfield presided and introduced the guest of the evening, Prof Geo A Coe, Professor of Philosophy in the Northwestern University He spoke on " The Ethics of the Free Dispensary "

Dr Fernand Henrotin followed on " The Value of the Dispensary to the Poor " He dwelt upon the necessity of organized effort to furnish medical treatment and advice to the indigent and took the ground that the remedy for the evils of dispensaries lay in each physician taking care of his share of the poor of his neighborhood

Dr Edwin H Dorland spoke on " The Injustice of the Dispensary "

Dr F A Davis followed on " The Value of the Free Dispensary as a Clinical Instructor " He said that the student must get clinical teaching, and, since the Cook County Hospital's wards were closed to students, as also those of many other hospitals, the dispensaries filled a want in the line of education He estimated, judging from letters received from members of the staff of the West-Side Free Dispensary, that the proportion of persons treated who were able to pay was less than 25 per cent

Dr N H Cazier spoke on the subject, " The Dispensary's Robbery of the Poor "

Prof C R Henderson, of the University of Chicago, an invited guest, spoke on " The Relations of Dispensaries to Other Charities "

ETHICS OF THE FREE DISPENSARY

By **George A Case**, Ph D , Professor of Philosophy in Northwestern University

The ethics of the free dispensary involves four particular, if not distinct interests

1 The interest of the poor
2 The interest of the physician who gives his services
3 The interest of the physician whose income may be reduced through competition with the free dispensary
4 The interest of medical science and education

Any attempt to adjust so various, complicated, and apparently conflicting interests is certain to fail if it proceeds from the standpoint of any one of them alone We must, if possible, discover a higher standpoint from which to discern whether there be any unity of interest underneath this diversity This higher point of view is suggested in the conception of the unity of life with which the doctrine of evolution has made us familiar Just as, in order to understand any species, we must consider it as a member of a series embracing all forms of life upon our planet, so in morals, we find the meaning of a particular life on the function of a particular class only as we grasp the connection of this one with universal humanity Reflection upon life very soon convinces us that no man liveth unto himself and no man dyeth unto himself The man who conceives himself as the sole end of his functions conceives an idea as unmanageable as that of fixed and changeless species For we are all creatures of the social conditions in which we are born, grow up and functionate For we [illegible]e all products of the race, and, whether we will or no, the products of our activity return to the race for its enrichment or its impoverishing From this it is but a step to the conclusion, though of course the grounds can only be hinted at, that we are truly moral individuals only so far as the life of humanity advances toward the goal of its development This relation of the individual to the species is brought home to us chiefly in what we call society—in the municipality, State or other civil organization, and in the accepted customs of the people among whom we dwell It follows, therefore that *the special function of the physician is to apply his specialized knowledge to the advancement of the civilization of which he forms a part*

This principle has direct application to the question in hand In the first place, it determines the proper attitude of physicians toward one another as one, not of personal rivalry or selfish compet tion, but of friendly coöperation for the attainment of a social good At the same time, since the physician is an organ of the social life, he himself must be maintained in the condition of greatest efficiency It would be folly to educate men for the profession of medicine and then starve them, equally so to hinder their professional development at the very period when they are most capable of growing We need not question the wisdom of letting them win their spurs As Mr Emerson says

> " Cast the bantling on the rocks,
> Suckle him with the she-wolf's teat,
> Wintered with the hawk and fox,
> Power and speed be hands and feet "

Nevertheless this process may be made so painful as to interfere with efficiency, and this, plainly, would be unjustifiable It is in every way for the interest of the medical profession to maintain the dignity and promote the development of its own members

In the second place, our general principle sheds light upon the claims of the poor for free medical service The medieval idea of charity was that of indiscriminate giving It is well illustrated in the Legend Beautiful of Longfellow

"It was now the appointed hour,
When alike in shine or shower,
Winter's cold or summer's heat,
To the convent portals came
All the blind and halt and lame,
All the beggars of the street,
For their daily dole of food,
Dealt them by the brotherhood"

Whether this description could be applied to a modern free dispensary, I leave you to decide In any case, however, such charity is of the kind that covers a multitude of sins against society Sympathy unguided by reason or correct social ideals is as bad as liberty unregulated by law For each of these tends, in its own way, to create a class which supports itself by preying upon the rest of society

True charity, without forgetting the value to both parties of direct, sympathetic contact of a man with his neighbor, asks, first of all, what will promote soundness in the social organism as a whole The relation of social classes is not unlike that of the organs of the body, the heart requires food from the stomach, and the stomach requires blood from the heart, and yet, after all, it is not the particular organ that makes the demand, but rather the organism in its entirety and unity Similarly, the claims of the poor upon physicians neither originate nor terminate in the poor themselves, but in the need for social soundness and development While this implies that the physician's personal desires are to be subordinated to the common good it does not imply that he is to be at the beck and call of persons incapable of appreciating the cost of knowledge and skill The poor and their philanthropic friends have no more claim on a professional man's time than they have on that of a business man And yet I fear that any hesitation, at the demand of so-called charity, to scatter indiscriminately abroad the product of years of toil and study, while it would be commended in the merchant as business sense, would be condemned in the physician as selfishness or lack of sympathy Wise unselfishness requires that charity be so dispensed as not to increase but rather to remove the need for charity To love the poor is not merely to heal their diseases, but also to find and remove the causes of the same, not merely to give them things, but also to develop them toward physical and moral independence, not merely to keep them alive, but rather to show them how to live The free treatment of persons able to pay seems to me utterly indefensible I do not see how it can fail to pauperize them, or at least weaken their moral stamina If they can not pay the ordinary fee, but can pay something, do not destroy their self respect by assuming that they are already paupers

Moreover, the danger in merely giving is doubled when charity is administered in a purely official, impersonal manner It may be that diseases can be cured by machinery, but surely something more than machinery is necessary to develop the dependent classes into self-respect and self support Charity must be so administered as, while relieving present needs, to awaken manly and womanly feelings, and inspire with worthy hopes and ideals And who has so good opportunity for doing this as the physician? His relation to the patient is intimate and confidential, and this of itself opens the way for mutual sympathy and good will Then, too, the physician touches the moral life of his patient at its basis or substratum, for we need not hesitate to admit the implication of evolution, that the spiritual life waits for the physical organization, and that physical perfection is a condition of spiritual wholeness To be complete men we must be perfect animals There is moral value, then, in obedience to the laws of health The patient who coöperates with his physician in the effort to attain physical soundness is already on the road to a self-respecting moral life The personal relation of the physician to his charity patient is therefore of the utmost importance both to the patient himself and to society Here the earnest practitioner can stimulate the nerve of social progress, but when medical charity becomes merely official, merely professional and technical in the benightedly narrow sense of those terms, then it fails of much of its social effect—it is charity with its most charitable part left out

This brings me to the interest of medical science and education in the free dispensaries This is a delicate point, for science is jealous, and rightfully so, of all her prerogatives I yield to no one in point of loyalty to her and her demand for independence, purity, and the payment of all that knowledge costs Neither pity for the pains of a few frogs and guinea pigs, or even an occasional man shall hinder her progress If it is really necessary for her advancement that young practitioners should be deprived of a few patients, let these practitioners make the sacrifice gladly upon the altar of science and philanthropy

But is it not just possible that the sciences may be in danger of becoming fetishes? That our devotion shall lead to undervaluation of pain, undervaluation of social interests, and an abnormal demand for material for experiment and demonstration? Let us not forget that the sciences were made for man, not man for the sciences As the philosopher Kant said, we should treat humanity in the person of every man, never as means merely, but always as an end

Now, so long as patients are human beings and physicians also human, physicians must have a thought for some thing beyond the bodily mechanism They must think of the humanity of their patients and of all other persons concerned You will never succeed in putting the professional part of a physician into one pigeon hole and the human part into another, or, if you do, you will have brought forth a monster

Shall medicine mix itself up with morals, then? Not with the disputes of ethical theorists, to be sure, yet how blind should we be if we beheld naught of the social mission of every science, particularly of sciences like medicine, which have direct practical application The obligation to further the ends of social evolution pursues us whithersoever we go If we ascend into the heaven of religious contemplation, it is there if we make our bed in politics, behold it is there, if we take the wings of the morning and fly to the uttermost parts of commerce, even there doth it find us, if we say, Surely the seclusion of the study and the specialization of science shall hide us, even our science becomes a light about us to show us our duty The science of medicine, let me repeat, is a function of social life, and its end the furtherance of social evolution

But you will say, You have not yet told us how to reconcile the four clashing interests No, I have not done this, and shall not attempt to, for my purpose is not to devise ways and means, but only to put into clear light the ethical principles involved I bear, however, the optimistic conviction that whatever ought to be done can be done, and that this body of representative physicians, if agreed as to the social mission of their science and skill, will be able to execute that mission without sacrificing the real interest of any one

THE RELATIONS OF DISPENSARIES TO OTHER CHARITIES

Abstract of remarks of C R **Henderson**, Professor of Sociology, University of Chicago

Most delightfully and clearly has my colleague, Prof Coe, laid down the fundamental principles which bear upon this discussion And both of us gratefully acknowledge our debt to the physicians whose practical applications of these principles, out of a rich technical knowledge, have been extremely suggestive to us Personally, I thank you for the opportunity of bringing before this body of men, representatives of a profession whose service is a ministry of goodness, the organizing work of the Civic Federation in the field of relief and prevention Your interest and sympathy will be an important factor in the success of this measure

The action of the Civic Federation in sustaining the work of the Bureau of Charities assures its existence, but only a very general coöperation will insure its adequate and permanent triumph Only very slowly does this conception of democratic fellowship in contrast with aristocratic patronage take root in a vast community Customs of conduct and habits of mind have a momentum and an inertia which are only slowly modified

And yet, you gentlemen have for years expressed your conviction based on daily contact with the poor, that a vastly deeper and broader social work must be done if we are to do more than merely mitigate and palliate the awful course of pauperism In this great service of anticipating the misery of poverty, and employing prophylactic measures, all classes, and not the rich alone, must unite for a long, costly and patient campaign Our city charities tend to separate us from the poor and widen that chasm between classes which threaten to swallow our civilization

Justly, and not in vain, we turn to the medical profession for help in this work We do not compete with any of the numerous relief societies We are the friend of all beneficent agencies which are honestly and efficiently managed, and in no sense their rival The city of Chicago, it is asserted by authorities, spends $2,000,000 a year through about 200 agencies, public and private If any of you were building a house costing $38,000,000 whose annual expenses would be $2,000,000, you would not think 1 or 2 per cent fee for architect and superintendent would be excessive When we consider the interests of happiness and misery which are at stake we shall be all the more anxious to see that public relief does as little harm as possible, and that the vicious stream of causation in social conditions be stopped near the fountains Only a deep faith in principles and large social forces can lift us out of the alms-giving rut of ages and enable us to believe in measures directed against the very primal sources of misery We solicit your membership, your support, your counsel, and we shall be grateful for the continuance of your confidence

THE DISPENSARY'S ROBBING OF THE POOR

BY M H CAZIER M D

Mr Chairman and Gentlemen I have been edified by the remarks of the gentlemen who have preceded me in paying respects to the "Free Dispensary" as it is, particularly so by the remarks of Prof Coe I want to thank him now, both for myself and for the Club, for his very able presentation of the subject from the ethical standpoint It must, however be remembered that it is the province of ethics to point out the ideal for which we should ever strive but can never attain, because of the imperfection of means True to this principle, therefore, Prof Coe has admonished us to "aim high" very properly, for in the language of the agrarian philosopher, "if one don't hit the bull's one may make a pretty good shot"

It now remains to present my cause to the jury, and as may have been anticipated it is none other than an indictment for *grand larceny* I would not have you assume the prerogative of a court of last resort, and that our mind and thinking shall be the dictum by which others *must* be guided Yet if it shall appear that the poor are being robbed under the guise of charity, and if it shall be brought home to the door of the medical profession that they are fostering a cancer which is preying on the life blood of society, then, gentlemen, we can not escape responsibility It is therefore highly important that we, now and here, realize our obligations—yours as jurors, my own as an advocate to the end that truth shall prevail, and that we "render unto Cæsar the things that are Cæsar's, and unto God the things that are God's" As medical men we have a knowledge of the facts, each one of us has an abundance of testimony, but it is not in the capacity of physicians that we are to decide public questions—questions which have to do with the welfare of society As *witnesses* you are *physicians*, as *jurors* you are *men*

If we mistake our obligation and think and act only as prompted by professional instincts, actuated by the first law of nature, and recognizing no higher obligation, we descend to the level of the city alderman who asks, "What is there in it for me?" And as a profession we must remain hopelessly divided, for those of us connected with dispensary work and aided by its emoluments, will defend it, with all its vileness, while those not so committed will demand its unconditional abatement It is upon a higher plane, therefore, than thoughts of self aggrandizment can place us, that the demands of the hour require us to act Gentlemen of this Club, much as I value the distinction of being a *physician*, much more do I esteem the privilege of being a citizen of this city and of this commonwealth of States, much as I respect a *doctor*, a thousand times more do I respect a *man* It is in the light of the intelligence of the physician shorn of his selfishness and prejudice, and supported by that manhood which is awake to our obligations to society and to the State, that I ask you to look with me at the side of this question which deals with the subjective influence on the recipient

Let us, therefore, banish from our eyes the glaucoma of sordid greed and look broadly and see if possible the whole truth Competition for dispensary patients, between the various medical colleges and private enterprises of those not favored with college-teaching positions, is so fierce that advertising in its various guises is resorted to to attract people to the places where '*distinguished physicians*" and "*learned professors*" may be consulted and medicines furnished "without money and without price" *Armies* of people in this city who, if not thus enticed, could have maintained themselves, their self-reliance and self-respect, have taken their first step into mendicancy by the by-road of the *free dispensary*

"Who steals my purse steals trash, but he who filches from me my 'self-respect' robs me of that which not enriches him, but makes me poor indeed"

Any one who has given study to the subject of scientific charities understands the danger which lurks in the giving of "out-door relief" The danger is to the beneficiary, it tends to pauperize the dependent, and, doing so, the injustice is visited upon society and the State Thus the individual is robbed, society is damaged and the State is put to expense because of this pernicious, indiscriminate alms giving, and the *free dispensary* is the most perennial robber of them all! Watch the course of the candidate A morbid desire for gratuity robs the mind of thoughts of higher purpose The vial of dispensary tonic creates an appetite for free hams, free flour and free coal Attendance at the dispensary is certified to the town agent, who is importuned to supply all temporal needs, in this manner the malinger finds encouragement, the dependent is pauperized to the detriment and damage of us all, while the premium stands on indolence and disgrace

Can the robbery of the poor be made more complete than by changing to a pauper a person capable of self-support? Can anything be more baneful than to induce one to cease to depend upon the strong arm of self-reliance and become a recipient of gratuitous commodities

"There are more diseases than hysteria that people love to suffer with, and the dispensary-affection is an example There is no evil that is more ruinous than the awful one of communism When a man gets that poison in his blood he will be a curse to the world until he is well hanged, thoroughly dead and everlastingly buried There is no curse so fatal as the curse of desiring to get something for nothing It is the half-hidden rock upon which the very ship of state, democracy itself, is running headlong Nothing is serving so subtly and so powerfully to prevent physical and social health, and to keep the world in the thaldom of disease, as medical beggery and medical communism When a man buys medical service for nothing he pays a high price for it He cultivates the habit of lazy reliance on medical aid, and grows careless of hygiene The people think they are fortunate in being treated for nothing, but instead of curing, the "treatment" really fastens the disease perpetually upon the very heart of the body politic"[1]

I desire not to be understood that the dispensary is the only source of pauperism It is simply the topmost flower of a weed that is sapping the life blood from myriads of useful plants Shall we welcome a reform?

"There can be no doubt that the instant influence of the necessity of treating crowds of mingled deserving poor and indistinguishable spongers, acts disastrously upon the physician's disposition and manners The very work wherein gentle kindness is as the sunshine's benediction over the gracious harvest fields of benevolence is transformed into bitterness and harshness What is more disgusting than arrogance and dictatorialness in a physician? What is more common in hospitals and dispensaries? A dog judges of his master's mood by the manner and the *timbre* of voice, although he understands hardly a word of language proper Every hospital patient, likewise, forms quick conclusions as to the man's character under whose care he comes, and instead of gratitude for the service rendered the ungentlemanly physician is breeding through the community a condition of mind that bodes no good for medicine The patient thinks himself sharp to secure some benefit from grudging surliness, and the overworked, non paid, half-excusable doctor is glad to get through his job in one or another wretched way 'He has the European habit and style'—such is the patient's verdict The patients know well enough when they are looked upon as 'clinical material'"[2]

In the city of Philadelphia, in this respect the worst cursed city on the continent, the Bureau of Charities offered its assistance to see that impostors should be excluded from the dispensaries The physicians in charge declined, saying, "We want the impostor for his influence, we want the doors left wide open, let everybody come" In this we have an exhibition of the willingness of men, and must I say physicians, to compromise principle, to compromise the good of society and the State, not to say the profession to their own individual selfish aims I therefore appeal to you as citizens of this, the *greatest city* of the *greatest nation*, to use the intelligence of the physician to guide you in your duty as men to reform this evil which menaces society Not solely because it robs the doctor of paying patients, but because it robs the individual—the recipient—of his self reliance, of his self respect, places barriers between him and honor and turns his face toward the dust!

This side of the free dispensary evil, this pauperizing of dependents, this robbing the poor of their right and title to respectability, appeals to you, it appeals to every medical man in Chicago, and if we who are connected with the evil, and likewise those who are not, shall choose to lie supinely upon our backs and wait, we will find that the awakened intelligence of society will visit upon us the sad *necessity of becoming followers in a reform we should have* led The study of scientific charities is fast carrying the seed of truth where it will bear most fruit, and if we would regain the respect and social standing accorded our fathers we must awaken to the demands of the hour Stated plainly, the evils which require correction are as follows

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[1] "Hospitalism," by A M Gould, M D Phil

[2] "Hospitalism," A M Gould, M D, Phil

1 Prevent the physician or surgeon, who does dispensary work from using his office as a '*cats-paw to rake the chestnuts from the fire*"

2 Prevent every one from receiving treatment at dispensaries except those actually too poor to provide for them selves

This will decrease attendance 50 per cent I say 50 per *cent* on authority[3] of all those who have made investigations I must question the reliability of the estimate made by Dr Davis This should also stop the use of dispensary patients as decoys for private waiting rooms and make dispensary work honorable

To this end it is necessary that there shall be selected a board of *censors* with *sense*, and who shall become *incensed* if abuses continued

THE DISPENSARY EVIL—INJUSTICE OF THE DISPENSARY

By E H DORLAND, M D, Surgeon to Lakeside Hospital, Chicago

Our subject defines itself It is not for us to discuss a doubtful proposition, but the *dispensary evil It is then* assumed, believed and recognized, that the free dispensary is an evil and that it requires no argument, no array of facts in this presence, to convince our hearers that the free dispensary is an evil It may be further assumed then that the scope of the discussion is to be confined to the exposition of the evil, and to the means to correct that evil While the profession is, in the main, responsible for this *dispensary* evil, the individuals, the organizations, churches or what *not, that furnish* the money to equip and maintain the free dispensary make a great mistake and do the *medical pro fession* a great injustice There are so many ways of *spending* money for the benefit of the whole community without wronging any part of it, that with slight exception, the man who endows a free dispensary does vastly more harm than good to the community, and directly wrongs the medical *profession* From a humanitarian standpoint one heavily endowed and well-equipped laboratory for the promotion of sanitary science would do more for Chicago than all the free dispensaries in the city The *motive* of the man of money, or the charity ball or the high toned *gambling scheme of the* church social, may be good but their efforts, and the result of their efforts are bad The well-meaning, but misguided minister who urges, even implores his church on 'Dispensary *Sunday*" to contribute a goodly sum for the free dispensary, *is enjoying* the delusion that he is working for a noble charity, and a side-factor is the dispensary doctor, who is working the church for advertising purposes and who is specially *active* and conspicuously officious on these occasions Many of us have observed a *man with a Solomon* Levi appearance, a prominent bidder at a church fair free dispensary push, pay $20 for a thing worth 20 cents An allusion to these "tricks of the trade" is sufficient, it will bring to mind the long and disgusting *list of* practices under the guise of charity that it is hoped that enlightened charity will banish from good society *in the near future* There are degrees of this evil, there are comparatives and superlatives *of this evil* There are two special divisions of the *injustice* of the free dispensary to medical men First, the direct injustice in that it takes a very considerable number of patients from their offices that could and would pay something for treatment, second, that *far greater* and more damaging injustice, that of prostituting a profession consisting of a body of learned men, men constituting preëminently the learned profession, to a standing below *that of* a trade, or even a day laborer, in that their services can be had for *nothing* The free dispensary educates people to expect something for nothing, than which *no* greater evil to a community can be done This phase of the subject should be *continuously* emphasized as the people can see and appreciate this side of the subject more readily *and clearly than* any other One of the most humiliating spectacles in the *whole round* of this dispensary evil, and one that does the medical profession the greatest wrong and injustice is that of the man who perpetrates the farce of diagnosing and prescribing for ten, twenty-five or fifty cases *in an hour* If it was for legitimate *teaching for the* boys on the benches, *two* cases properly handled, properly and correctly diagnosed and skillfully prescribed for, would serve the purpose infinitely better Another form is exhibited in the voluminous writings of the dispensary doctor The free dispensary literature, and reports of cases treated at free dispensaries, are wholly untrustworthy, and are wholly worthless *to the student of medicine I believe* I voice the consensus of opinion of the medical gentlemen of my acquaintance when I say that I believe that there has never been such a volume of stuff in the shape of reprints and clinical reports as at the present time flood the offices of the profession I believe further that I state a fact in saying that from 60 to 90 per cent of this "stuff" is not worth the paper it is printed on to the profession, and that the light of it is most observable when used as kindling with which to light the evening fire on the grate, by the warmth of which to read *books written after an exhaustive study of the* subject in hand, and in which scientific facts are stated and the doctor left to draw his own conclusions The obvious injustice to the profession exhibited in the rough, gruff, unseemly and boorish manners of the dispensary doctor is another great wrong and misrepresentation of the medical profession Practice in the dispensary unfits a man for practice among refined people *Of these* people that crowd into the free dispensary the doctor knows nothing, knows nothing of their habits, manner of living, thinking, speaking, working, *eating, drinking, or their* environment in any way The whole free dispensary tends to teach the people to *hold us in* contempt The spectacle of doing business *free* exists in no other walk of life, and it has always been true and is true to day, that the people do not appreciate that which costs them nothing The teaching factor in the free dispensary is as near worthless as anything can be It is a very rare thing *that a physician* who enjoys an experience in a refined private practice attends a free clinic If there is nothing there desirable for him to learn, can that instruction be of *any real* value to the medical students? If the dispensary doctor is there for his own instruction it would *seem that it* takes him a long time to "learn his trade," whatever he treats, whether it be eyes, or throats or wombs or feet

The impression is kept very prominently before the people that they will be examined and treated by the great professor at the free dispensary, and it seems that some of our medical men favor and prefer the title of ' Professor" to that of ' Doctor " This impression, this figure head of the "*Great* Professor" is, in the main, a gigantic fraud practiced upon the people As in politics, so in dispensary professorships, a man of money, or influence, or *ability holds the office, but* some one else does the work We can teach the people that the free dispensary is for paupers, that the service at a free dispensary is not at all like that of a private office, that the acting free dispensary doctor is not the best doctor, that he is a man of little or no experience and is there to experiment Let the dispensary *doctor, if he* is sincere do what he can, and he can do a great deal more than he does do, *to* weed out and kick out the dispensary parasites In this corn and *hog city of ours* we have a large class of people of very little refinement and less taste that will accept the free-dispensary service and is wholly unworthy of it in every particular The free-dispensary doctor will perscribe for this class of people and belittle and humiliate himself and disgrace the profession in doing so Charity is greatly exaggerated and overdone in Chicago but no charity is so terribly abused as the free dispensary A careful estimate will show that there is no legitimate need for more than one fourth *of the free dispensaries* that now exist, unless it is to advertise the doctor that is giving his life for the people It is often a most pathetic sight to observe the efforts *of* "Mrs" Free Dispensary Doctor, or her mother in-law, as solicitor of funds to maintain the free dispensary *It is* very apparent, too apparent in the main, that the free clinic is an advertising institution I venture the statement that the better you know the *free dispensary*, its professors and its methods, the less you will admire the free dispensary, its professors and its methods As ever, so now, bigotry is universally an evidence of ignorance Let us not deceive ourselves into the belief that unqualified statements and bold assertion are indications of erudition Let us withhold our approval and discontinue all patronage to the men that are willing to lend themselves to the perpetuation of this gigantic abuse and injustice There are plenty of better doctors than those that are mere teachers The profession is, to a degree, responsible for the bigotry, too prominently and painfully observable in the free-clinic professor The average free-dispensary promoter is just about the size mentally to be spoiled by the admiration and applause of first-year medical students We can do much to correct this abuse by raising the matriculation grade for all medical students Let a bachelor's degree be required to enter any medical college When this is done our young men will attend the full four or six years' course at the universities of medicine instead of stock company medical colleges University professors do not need to resort to any such methods The number of patients that are treated free has more than doubled per 1000 in the last ten years Are the people less able to pay for medical service than they were ten years ago? There is nothing within the confines of medical practice that has wrought such harm and injustice to the profession of medicine as the lesson the people have so readily and all too well learned —that they can get medical and surgical treatment for nothing

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[3] Warner's American Charities chapter on 'The Destitute Sick Investigations in New York of several thousand dispensary habitues revealed that 25 per cent were found to be abundantly able to provide for themselves another 25 per cent had given the wrong address to conceal themselves This left 50 per cent who were rightfully entitled to participate and who were being robbed by the impostors

BOOK NOTICES

Medical and Surgical Report of the Children's Hospital, 1869-1894 Edited by T M Rotch, M D, and Herbert L Burrell, M D Boston Published by the Board of Managers 1895 8vo cl

This sumptuous volume with its elegant paper, beautiful illustrations and well-written text, tells the story of the founding, the development, and, we were about to say, the perfection of the hospital The contents of the volume are as follows

Division i—(*administrative*) 1 The History of the Hospital, by Francis H Brown, M D, who has been Secretary of the organization from the beginning in 1869 2 The Executive Management of the Hospital, by the lady Superintendent, Sister Caroline 3 The Convalescent Home 4 The Outdoor Relief Department

In Division ii (*medical*)—we have a series of interesting short essays 1 Typhoid Fever, by F Gordon Morrill, M D 2 Value of Milk Laboratories for Hospitals, by T M Rotch, M D 3 Relation of Aural Service to the Needs of a General Hospital for Children, by Clarence J Blake, M D 4 Malaria in Children, by E M Buckingham, M D 5 An Epidemic of Scarlet Fever, by Thos F Sherman, M D 6 Etiology of Chorea, by Chas W Townsend, M D 7 An Epidemic of Diphtheria Apparently Stopped by Use of Antitoxin, by F Gordon Morrill, M D

Division iii (*surgical*)—is divided in three parts, the first being a description of the work done in the surgical wards of the hospital, in the surgical out-patient department, and in the surgical appliance shop The second part gives a description of the standard routine of procedure in the classes of cases treated at the hospital This includes description of the arrangements for the operating room, sterilization and dressings, gymnasium, form of records and blanks, etc Third part contains a series of original papers by E H Bradford M D, R W Lovett, M D, Herbert L Burrell, M D, W N Bullard, M D, H W Cushing, M D, and E G Brackett, M D

Few hospital reports are of more practical value, and as an exponent of *fin de siecle* medicine and surgery its authors will take a front rank

A System of Surgery—By American authors Edited by Frederic S Dennis, M D, Professor of the Principles and Practice of Surgery, Bellevue Hospital Medical College, New York, President of the American Surgical Association, etc, assisted by John S Billings M D, LL D, D C L, Deputy Surgeon General U S A To be completed in 4 im 8vo vols, 900 pp each, with index Profusely illustrated with figures in colors and black Vol iii, 908, pp, 207 engravings and 10 colored plates Price per vol, $6 cloth, $7 leather, $8 50 half Mococco, gilt back and top For sale by subscription Philadelphia Lea Brothers & Co

This volume has been continued on the same plane of excellence as its predecessors The plan of the work makes this volume include among its contributors the names of several well-known specialists outside the ranks of the surgeons The contributors to this volume include Drs D Bryson Delevan, Henry H Mudd, Charles B Porter, Willard Parker, Fredrick S Dennis, George E de Schweinitz, Henry D Noyes, John E Weeks, Gorham Bacon, Louis McLane Tiffany, William A Hardaway, J William White and Robert W Taylor

Dr White gives a great deal of space to the subject of castration in certain cases of prostatic hypertrophy, and Dr Dennis presents a conservative view of pulmonary surgery Dr Parker an excellent resumé of bronchial cysts, and Dr Taylor gives some very recent methods of bubo treatment, and we might easily say some very late views on the general subject of syphilis The volume as a whole is fairly representative of the existing state of the topics under consideration A book of this kind, as a rule, does not assume to promulgate original investigations, but only to record the science of the day as it is understood Whether the more ephemeral topics and methods shall be included largely depend on the judgment and tact of the editor In all such matters, Dr Dennis has so far displayed a taste and judgment creditable alike to his wise discretion and to his common sense We shall look with renewed interest for the appearance of the concluding volume

Diphtheria and Its Associates—By Lennox Browne, F R C S, editor Illustrated by the author London Baillière, Tindall & Cox Philadelphia J B Lippincott & Co 1895 8vo, cl

This monograph is one that will naturally attract much attention, not only on account of the deep interest attaching to the subject itself, but because of the high standing of the author There are thirteen chapters in the book, namely i History of Diphtheria ii, iii and iv Etiology v Pathology vi Bacteriologic Diagnosis of Diphtheria and its Associates vii Clinical Diagnosis of Diphtheria and its Associates viii Record of Illustrative Cases, etc ix Elements of Prognosis in Diphtheria x Treatment of Diphtheria and its Associates xi Laryngo tracheal Diphtheria Croup xii Hygiene and Prophylaxis xiii Formulæ for Remedies in Diphtheria

There is an appendix in which the serum treatment of diphtheria is discussed in all its bearings This section is an exhaustive summary of the existing knowledge of the subject The accidents of the serum treatment are not extenuated, but on the contrary, as will be seen by reference to another column, its use is distinctly condemned But leaving aside the question of serum-therapy, the book will stand as an able and authoritative exposition of the subject of diphtheria

Electro-Therapeutical Practice—A ready reference guide for physicians in the use of electricity By Chas S Neiswanger, Ph G Flexible covers, pp 30 Chicago 1895

This book is said in its preface to teach "plain facts and simple rules" for practitioners The method adopted by the author is, to say the least, peculiar The common list of diseases is presented, and under each name the manner of applying electrical treatment There is no half-way or faint-hearted system recommended in this book, for this pharmacy graduate has no pathologic or diagnostic doubts, but like the "plain, blunt man" that he is, he goes right on to apply electricity without let or hindrance to all kinds of diseases and conditions, from an abortion to a case of exophthalmic goitre There are some good points of technique, but as a whole the book belongs to a class that had better not have been written

Outline of Materia Medica and Pharmacology—A text-book for students By H M Bracken, M D Philadelphia P Blakiston, Son & Co 1895 8vo, cl Price, $2 75

The author informs us that it is intended the book "shall serve the purpose of a text-book, for use in the study of materia medica, to facilitate note taking in the lecture room, and to aid in the laboratory study of drugs" The metric system has been given the preference throughout The book has been carefully compiled, and in our judgment is destined to become a very popular text book Although particularly intended for students, the practitioner will find it instructive, especially with respect to the newer remedies, and as a convenient work of reference

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SATURDAY, DECEMBER 14, 1895

SERUM-THERAPY IN DIPHTHERIA

Just as we were growing comfortably settled in the conviction that if there was anything in the doctrine of serum therapy, it was surely in cases of diphtheria that its strongest statistics were to be found, along comes one of the ablest Laryngologists of Great Britain, MR LENNOX BROWNE, and in an able discussion of the subject,[1] reviews the question adversely After stating as a result of his experience that with serum-therapy "a greater number of children have been found liable to attacks of cyanosis and fainting, with a correspondingly increased demand for nervines and stimulants," and that "complete recovery is for the most part found to be greatly delayed, and an unexpected fatal result at a late period is more frequent," he continues "When drawing attention at a meeting of the Clinical Society last December to an increased liability to the most grave complications of diphtheria, viz , anuria, nephritis and cardiac failure under the use of serum, we took occasion to express a hope that further experience might prove that the disadvantages of serum would be more than outweighed by its benefits "

Having carefully compared the results of 1,000 cases in which there were 284 deaths, and divided them into hundreds, he states that "the actual mortality was the same, namely, 27 It was 27 10 on the whole number—1163—treated during the year 1894 at the hospital whence our comparisons were made"

After a lengthy weighing of the result of his observations he thus concludes

"The foregoing observations as to the effects of serum treatment will, we trust, have made it clear that the injection of antitoxic serum into a patient attacked by diphtheria is not altogether free from an added danger, notwithstanding that the amount of active principle administered can be measured only by millionths, and we have seen that the power of this serum to do good and *per contra* its capacity for inflicting injury is in proportion to the duration of the disease—in other words, to the degree of the toxæmia

"As a corollary, we might be able to pronounce that the power of antitoxic serum to act as a prophylactic against a possible attack of diphtheria is in proportion to the rigor and healthy blood condition of the individual in whom it is employed, but the very minute dose administered for this purpose is evidently capable of being soon broken up by cellular action in the healthy

"We can, therefore, understand the general admission as to the evanescent character of the immunity so obtained Moreover, reports of cases are not wanting in which noxious and even fatal results have followed the use of serum when employed as a prophylactic

"On all these grounds, therefore, we do not feel justified in recommending serum for this purpose More real methods of preventing the spread of diphtheria are to be found in improved sanitation, in prophylactic surgical treatment already detailed, and in efficient isolation and disinfection "

It is pointed out that in many of the continental hospitals where the results of serum-therapy are asserted to show such remarkable diminution of mortality, that the former mortality statistics in the same hospitals were greatly in excess of those obtained by strict adherences to the classical treatment so ably carried out in some of the British hospitals

The JOURNAL in thus giving its readers the conclusions of one of the ablest specialists of London, wishes once more to emphasize the necessity of making haste slowly in accepting every continental fad that is forced upon us Let the memory of the BERGERON treatment, and of the tuberculin be a sufficient warning, without making ourselves ridiculous by undue haste There are so many opportunities for having new theories tested on a large scale in the world's great hospitals, that the general practitioner may well exercise patience while the great problem is being worked out In the matter of diphtheria let us remember that wherever the disease is *immediately treated* by appropriate local remedies, recovery is the rule Frequent inspection of the children's throats, and thorough cleansing of the nasal passages, will prevent the disease in many cases Prevention is not only better than cure, but the dangers of hitherto unknown horse toxines, may be avoided

Larger and more extended experiments, which we would by no means discountenance, may indeed demonstrate the truth of the claims brought forth by those anxious to herald a new discovery, but in the meantime the general practitioner can afford to adopt more stringent precautionary measures, more active local methods, and WAIT!

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[1] Diphtheria and its Associates, 1895

THE NEEDS OF THE MEDICAL DEPARTMENT OF THE NAVY

The annual showing of the Surgeon-General of the Navy exhibits the medical corps of that service at a still lower level in its *personnel* than a year ago One by one, its men of experience are lopped off from the top by the statutory limitation of age, though in the full vigor of mind and body, while a rare addition to its foot at long intervals, of an occasional recruit fails to arrest its steady ebb Fourteen vacancies in a corps which only consists of 170 members, when its ranks are filled, at a time when employment is eagerly sought by young men in every vocation, are significant of something wrong in a body which was once recognized as the *corps d' élite* of the Naval Service

The examinations for admission are no more severe than formerly, and are probably not so exacting as in the days of the old Philadelphia Board, when it was considered high honor to pass its ordeal and when men were examined in anticipation of vacancies, which sometimes did not occur within the year, compelling the successful candidate, for whom there was no place, to submit again to a trial a year later Then faculties urged the brightest of their graduates to go before the Naval Medical Board, and rival colleges took pride in the number of their men who passed To-day there is not a school or teacher in the whole land that does not dissuade their young men from entering the Naval Service The reason is plain enough—the unsatisfactory position of the medical officer of the Navy, and the relative inferiority of his status and pay to those of his professional brethren in the Army The profession properly resents the degradation of the bearers of its diplomas to the level of school boys from the Naval Academy, and the studied contumacious treatment to which they are subjected throughout their whole career by the tyrants of the quarter-deck

The leading national medical organizations have appointed committees during the past year to urge upon the next Congress, now about to convene, remedial legislation looking to the elevation of the status, pay and emoluments of the Naval medical officer to those of the medical officer of the Army, though the Army itself has cause for complaint in the matter of its insufficient numbers, but its medical officers are officers in fact, as well as in name, and they are recognized and treated as such, without any of the wretched evasions and discriminations which prevail in the Navy An Army medical officer *commands* his hospital, a naval medical officer is only "in charge" of a naval hospital, though in it there may be two or three hundred officers, employes

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MODIFICATION OF THE "RED CROSS OF GENEVA" AS THE PROPOSED SYMBOL OF MEDICINE

Some of our friends find time to work out the symbolism and esthetics of their profession When they do this cunningly and tastefully they well merit our thanks Accordingly, the editor of the *Boston Medical and Surgical Journal*, in his issue for Nov 14, has our gratitude since he appears to have hit upon a proposition that may meet with a very general approval His advice, in brief, is that the Geneva Cross, somewhat modified, be adopted as the emblem of medicine, whether in art, literature or organized undertakings

It appears that the question of proper insignia has been under consideration by officers of the medical department of the Army When their conclusion shall have been reached such selected insignia will probably also be accepted by the militia of the different States Possibly the medical department of the Navy will adopt the cross, with a suitable distinctive modification

The editor of that journal says "Recently published remarks concerning a distinguishing device for the medical department of the Army bring to mind the whole subject of medical symbolism, in both its civil and military application After extended research among the histories and other records of ancient and modern times, together with observation of customs yet extant among socio religious communities, a form has been found which appears to answer the requirements necessary to appropriate insignia by which to characterize medicine It is well known, to those informed in such matters, that the caduceous—the emblematic staff and serpents—also serpents in different postures and variously associated with other objects, and the cross in its many forms and combinations, are outgrowths of one and the same root Numerous other things, more or less used as symbols of medicine, such as the oak, palm, gallus, *et alia*, have the same origin Moreover, the Geneva Cross, of the Red Cross Society, is now recognized the world over in its best practical application

"We have here, therefore, a proper symbol of the healing art, fitting in its origin, significance and actual use by civilized humanity The ordinary design might be improved upon by lengthening, very slightly, the arms of the cross, so that the square forming the center would be a trifle smaller than the corresponding part of the actual Geneva Cross This variation is recommended for the reason that in the common form of the red cross, the great mass of color in and about the center causes an apparent lack of proportion, by making the middle square look larger than it really is This optical illusion would be corrected by this suggested modification For use on military uniforms the cross might be of some handsome shade of red, made of durable material set in gold If the red cross is used as a medical emblem, it should be recognized that it is of international significance, and a red cross with gold about the edges is ornate and might serve for a collar device to designate a medical officer "

The red cross is an emblem of neutrality, and should be easily distinguishable at a distance, and thus protect those who by the treaty of Geneva are classed as non-combatants, though it is probable that, with the present long range firearms, non combatants, whether medical officers or newspaper correspondents, will have to take the common chances There is one other suggestion that may be made in the carrying out of the hints given in the foregoing paragraphs, namely, the central square made by the four outlying arms may be left uncovered, so as to receive a lettering or emblem suitable to the respective subdivision of the army, navy or militia This central square may be graded by the use of gold, silver or other materials, for higher and lower ranks, or other distinctive markings or colors may be developed according to the variant occasions for differentiation

THE EVILS OF A LIMITED TENURE OF OFFICE OF HEALTH OFFICER

By reason of a strong paper before the recent meeting of the British Medical Association, read by Dr Whitelegge, on the above subject, a concerted movement is being made in England to secure a fixity of tenure of Medical Officers of Health in a greater degree than already exists A far larger proportion of English sanitary officers has permanency of tenure than is the case in this country, but altogether too large a number feel the pinch of uncertainty and its accompanying handicaps The editor of the *Sanitary Record* comes trenchantly to the front on behalf of these slighted officials, whose very livelihood may be in jeopardy from the caprice or parsimony of the respective local boards of more or less ignorant and politically-inclined laymen Politics and health administration mix with as little facility as do oil and water—when they do mix, to any good purpose, it is by dint of prolonged *agitation* The agitation in this particular instance has been begun, and will without doubt be continued to the end In this country, no such beginning has been made and can scarcely be hoped for until we have, at least, as a starting-point for the building up of a consistent and uniform code of sanitary regulations, a NATIONAL DEPARTMENT OF HEALTH

The remarks of the editor of the *Sanitary Record* on fixity of tenure for medical men in sanitary life are, in part, as follows

That it is in the highest degree desirable that competent officers should be so far independent as to be able to act in the way they deem best for the public good without the fear of dismissal or of reduction of salary, should they, in the performance of their plain duty, give offense to a member of the Board, or to some person of local influence, no one can seriously doubt, but the question is by no means so simple as that of securing the like protection for the Sanitary Inspectors, for the duties of these latter officials, and the areas over which they exercise them, are not likely to undergo any very great change. But the medical branch of the sanitary service is at present in a state of chaos, presenting a serious obstacle to progress, which it would be folly to perpetuate. Though some few Medical Officers of Health have succeeded in combining the efficient performance of their official duties with private medical practice, their cases or their circumstances have been exceptional. The ordinary practitioner finds himself hampered at every step; his attention is divided, his time is not his own; the calls and interruptions of practice render continuous investigations wellnigh impossible, and every difficulty felt by the Medical Officers of Health at the mercy of a Board is felt a hundredfold more painfully by a man who can not afford to give umbrage to his patients, to say nothing of possible friction with other medical practitioners. Twenty years ago such appointments were a practical necessity, but it was, doubtless, in view of their gradual supersession in the not distant future by others of experts to larger areas, that these were made in the first instance for periods not to exceed five years. Some of these men have developed into experts, a new generation of specialists has arisen, and a number of whole-time appointments and of combined districts have been created without our being much nearer the realization of the ideal, since the appointments originally intended to be provisional are repeated on all sides, and those fulfilling the conditions required for permanency are still made temporary.

The question is one that only a strong Government can take in hand, but the present time seems most opportune. No doubt the army of small officers who add various sums from £5 to £100 to their incomes by accepting or assuming functions for which they have no special aptitude, just as they would take the more congenial work of a club or a poor-law appointment, will resist the change, but it must not be longer delayed, and for any medical officers who really have their hearts in the work, plenty of room could be found in the new combinations.

OVERDONE STERILIZATION

There is a golden mean in all things and even the most salutary and sanitary practices can be carried to excess. In what may be termed microbophobia, the extremes of caution as to the exposure to pathologic germs, there may be a danger on the other side; one may, in avoiding the Scylla of organic infection fall into the Charybdis of chemical poisoning, or starvation. These thoughts are suggested by a paper by DR. LOUIS STARR in the December number of the *American Journal of the Medical Sciences*, in which he gives details of three cases of infantile scurvy due to the exclusive use of sterilized milk; and he further states that he has seen five other cases in consultation within eighteen months. He attributes the disease to the alterations that occur in the milk during the process of sterilization, especially in the lactalbumin which has its solubility diminished, and in the fat globules which coalesce with each other and with some of the insoluble albuminous matters. All the cases recovered promptly on a diet of unsterilized milk together with raw beef juice and orange juice and tonics.

DR. STARR seems to have no doubt as to the chemic nature of the toxic agent, but the suggestion is not a very unnatural one that there may be even some organisms in the diet that are beneficial if not essential to its wholesomeness. It is, it is true, generally held that the enzymes or unorganized ferments play the chief part in human digestion, but the final word has not yet been spoken on the question and there may still be a possibility of a certain utility of the lower organisms in digestion in man as there is undoubtedly in the herbivora, or the microbes, while not acting directly in digestion may, by their presence and products, indirectly aid the chemical changes in the process. While admitting the probability of the chemical alterations caused by the sterilization process being sufficient to account for the phenomena of innutrition and scurvy that were observed, it may be as well also to not altogether lose sight of other possibilities.

In our warfare against pathogenic germs it is well to remember that, as a rule, they require a suitable soil for their development, a point of least resistance for their attacks, and that most of them are comparatively harmless where this is lacking. We send consumptives to swarm together in Colorado and California, and to their advantage, notwithstanding the concentration of infection we thus produce; and likewise, whenever we lower the systemic tone by seriously modifying natural processes and conditions we open the way not only to outer infection, but perhaps still more to the dangers of auto-intoxication from the toxins produced in the system which require its normal condition for their safe disposal.

There is an extreme in this matter, that, baldly stated, would seem to any one ridiculous, such as the carbolated kiss; but there are more common practices less radical than this that fall somewhat short of the sweet reasonableness that should govern the conduct of a scientific physician, and, as we have seen, even apparently rational procedures sometimes fail of being fully on the safe side.

It is not intended here to say anything against reasonable precautions, but simply to *call attention* to a possible danger from lack of a comprehensive view of all the possibilities in any particular case.

SALE OF MEDICINES IN ORIGINAL PACKAGES

The "original package" and 'interstate commerce" contention has now, after a season with almost everything else ranging from liquors to pianos, been attached to the sale of medicines. Iowa has a statute which requires, under penalty, that any itinerant vendor of any drug, nostrum, ointment or appliance of any kind intended for the treatment of disease or injury, who shall by writing or printing or by any other method publicly profess to cure or treat diseases or deformity by any drug, nostrum, manipulation or other expedient, shall pay a license of one hundred dollars per annum, to be paid to the treasurer of the commission of pharmacy This statute, it was argued in the case of State v Wheelock, decided by the Supreme Court of Iowa, Oct 10, 1895, is repugnant to the clause in the federal constitution which provides that Congress shall have power to regulate commerce among the several States The defendant here was an itinerant vendor of drugs and nostrums, without a license, within the meaning of the State statute, while the medicines he sold were in the original packages in which they were shipped into the State Thus was fairly presented this important question

To begin with, the courts admits that the power vested in Congress to regulate commerce among the several States is a power complete in itself to prescribe the rules by which that commerce is to be governed, that it is coextensive with the subject on which it acts, and can not be stopped at the external boundary of a State, but enters it, and is capable of authorizing a disposition of articles of commerce so that they become a part of the common mass of the property within the State But, citing several decisions of the Supreme Court of the United States, it says that it has been held that State laws which do not discriminate between residents and products of a State and those of another State, which are not designed to interfere in any manner with interstate commerce, as those, for example, which are in the nature of a simple tax upon sales of merchandise, imposed alike upon all persons, whether residents or non-residents of the State, are not repugnant to the constitutional provision in question However, after pointing out that there is no discrimination in the statute under consideration, the court goes on to state that its primary object is not to derive a revenue for the use of the State, but in large part, at least, to protect its citizens against solicitations and harmful practices of irresponsible and unknown traveling vendors of drugs and other articles intended for the treatment of diseases or injury, who, in carrying on their business, publicly profess to cure or treat diseases, injuries, or deformities and thus promote the sale of their wares to the credulous Indeed, the act here prohibited might be committed without any actual sale

The conclusion of the court is that the enactment in question is within the police power of the State Narrowing the discussion, it says that the right to sell, in original packages, medicines brought from another State, does not include the right to have sold by an unlicensed itinerant, who, to make sales, professes knowledge of the art of healing Statutes which apply to such sales are not, in any sense, regulations of interstate commerce, but a reasonable exercise of the police power of the State, which may be applied as well to articles of interstate commerce in the hands of the vendor, and offered for sale in the original packages, as to articles produced within the State

The amount of the license fee required by the statute, the court declares not to be excessive, and the regulations thereof, it pronounces reasonable

THE DEPARTMENT OF PUBLIC HEALTH

As announced in our Washington column last week, the Chairman of the Committee on the Department and Secretary of Public Health, Dr Jerome Cochran, has appointed an auxiliary committee in Washington, consisting of Drs H L E Johnson, S C Busey, C H A Kleinschmidt and J R Wellington The Association bill has not been introduced this session, but the old Bureau bill has been introduced in the House The Association does not ask for a Bureau, it wants a Department, and intends to be satisfied with nothing less

CORRESPONDENCE

The Atlanta Meeting

Rockford, Ill, Dec 6, 1895

To the Editor —Permit me to suggest that the Transportation Committee of the Association soon begin considering and agitating the question of railway rates to the meeting at Atlanta next May It is not sufficient that transportation be secured for the editors of medical journals who have secured a square or half page of advertising from railways and connecting lines to Atlanta These journals may "whoop up" the meeting, but the rank and file, the bone and sinew of the profession, will not get there unless some generous concessions are made by the transportation companies

Would it not be a good plan to secure a pledge in advance from the city or cities bidding for the Association to guarantee a cheap railway rate? The G A R the political and the secret society conventions do this, or begin work early to secure minimum rates The National Teachers' Association has just secured a rate of one cent per mile to Buffalo The Knights of Pythias are contesting for the same, and the G A R had this guaranteed in advance for the last three years There is no reason why the American Medical Association should receive *less* consideration from these corporations than other organizations I was going to say kindred organizations, but there is no Association that is akin to ours in any sense as far as regards great good to the common community of humanity, certainly the very antithesis of railway corporations in humanity's arena

The Journal has now secured a place and has a strength in affairs in the profession and out of it that will command attention It outranks all other medical journals and securing a large attendance at the meetings will secure a large subscription, and members will soon learn that the Journal fills all the requirements of the general practitioner, and that he can dispense with the subscription price of three or four for which he has been paying and apply the same toward liquidating the expense of his trip the Association meetings where he may, after a few successive attendances, acquire confidence enough to rise and express his views, not leaving the entire field of discussion to self-assured specialists or practical politicians and parliamentarians D L

Women Medical Missionaries

Boston, Mass, Nov 30, 1895

To the Editor —We are desirous of finding a fully qualified medical lady to go to Ceylon as a missionary of the American Board of Commissioners for Foreign Missions at as early a date as possible (not later than Oct, 1896), to open the work of the Woman's Medical Mission in North Ceylon The new buildings are in process of erection and will be completed according to the contract, furnished throughout and ready for occupancy within a few months The Medical Mission House for the residence of the lady doctors, is large and commodious The hospital will accommodate about forty patients The Nurses' Training Home will accommodate sixteen nurses and a matron Dr Louisa H Grieve (who is acting as a temporary supply until two permanent lady doctors can be secured for this work) has, at the branch dispensary, two days in each week, from fifty to one hundred patients each dispensary day The branch dispensary will be continued and the new dispensary, which is ten miles distant, will probably receive as many patients The American Board of Commissioners for Foreign Missions, the oldest and one of the most responsible Missionary Societies in the United States, which, on our recommendation, will appoint the lady doctors and have the general supervision of their work, will provide for the two medical ladies the usual allowances toward outfit, passage and salary, and will provide sufficient funds for the support of a staff of native helpers and for the current expenses of this Medical Mission for Women

Location The northern province in Ceylon, in which the Woman's Medical Mission is located, has a population of 300,000 people, all of whom speak the Tamil language All the women and children would be accessible to the lady doctors

Missionary Work Ten missionary families, connected with three societies, are carrying on missionary work There are about 3,000 native Christians who are communicants, and about 15,000 children under instruction in mission schools

Medical Mission Work Rev Dr and Mrs Dr Scott, both fully qualified doctors and missionaries of the A B C F M, have the oversight of the Medical Mission for men, which is located about a mile distant from the W M M Last year they treated over 4,000 patients, and they are now enlarging their hospital accommodation They have expressed their willingness to act as consulting physicians to the W M M

Funds The value of the land, buildings, furniture, equipment, medicines, instruments, and cash in hand of the W M M is over $20,000, and the annual income is estimated at about $3,000

Climate The climate is an even one, the thermometer ranges from 78 degrees to 93 degrees in the shade The rainfall averages about forty inches in a year The dry heat is less enervating than the moist heat of many other places in Ceylon and India Missionaries have lived and labored, in not a few instances, for thirty, forty, and in some cases even fifty years in this Province

If any fully qualified medical ladies who are readers of your journal, and who have work in the foreign field in view, would write to us, we would gladly give them any further information they might desire regarding this work

Yours truly,

Mary and Margaret W Leith

The Oldest but Latest Fad—Hypnotism

To the Editor —You will agree with me that it is a difficult matter to make *one cause* explain all phenomena Sometime in the past I wrote an article for the Journal under the heading, "Modern Insanity" and in a jocular way put it as a cause of many unique acts At that time I had not "read up" on "Hypnotism" Since reading the last number of the Journal I have reason to modify some of my views Hypnotism in its latest phase assists wonderfully in explaining a phenomena heretofore not understood For instance *One* who is a *multiple personality* can say in regard to his unusual acts, that Number 2 or Number 3, did the act, and therefore Number *one* is excusable Whether or not he could make a court or jury believe him is another question The average juror looks upon himself as a *unit* and may be hard to convince that any other individual is *more* Evidently the "Fool Killer" is dead or has ceased work How a medical man can be led astray by such idiotic "fads" as spiritualism, hypnotism, clairvoyance and other superstitions is hard to understand, and how a man can believe in hypnotism and yet not believe in "faith cures" is still another mystery The idea that a man can influence another hundreds of miles away without any means of communication is not mysterious but simply untrue The believers in hypnotism all agree that a man can not be hypnotized who is not willing Does this not prove that hypnotism is not a *remedy?* Can a man by will power alone resist the influence of remedies? Can he keep calomel from purging or ipecac from vomiting by will power? Does it not "make you tired" to think that leading men in the profession will not only listen to this preposterous "fad" but will write it up, and indorse it in the leading medical journal in the United States? I am a little surprised that the editor allowed the "fad" space When a man loses his identity and becomes two or three or a dozen different men then it is time to quit When I am in a happier mood I may say more along this line, but for the present am done Very respectfully submitted,

W P Howle, M D

Oran, Scott Co Mo

The Sun Glass as a Cautery

Washington, D C, Dec 10, 1895

To the Editor —I notice in the last issue of the Journal, a reference to the use of the sun glass as an actual cautery Permit me to call attention to the fact that this is one of the oldest cauteries Pliny, writing in the first century, Book xxxvii, chap 10, (Bohn's edition), says

"I find it stated by medical men that the very best cautery for the human body is a ball of crystal acted on by the rays of the sun"

It is unfortunate that Pliny forbore to give his authority for I can find no other reference to this method of cautery in the ancient writings that I have consulted Perhaps some of the learned readers of the Journal may inform us

Truly yours, An Old Member

Sulfonal in the Vomiting of Pregnancy

Allison, Iowa,

To the Editor —I have found this medicine a sure relief for this most obstinate trouble I have been using it over a year, have recommended it to neighboring physicians and never knew it to fail Those who have tried it say it works like magic It will relieve hiccough as effectually as well My method of giving is 10 to 15 grains (60 to 1) dissolved in two tablespoonfuls boiling water, and given as hot as the patient can bear it Sulfonal will stop vomiting of most any character, the quickest, safest and surest of any remedy n the category of medicine I believe every physician hould know this and hope the Journal will pass it around

S E Burroughs

PUBLIC HEALTH

Hygienic Examination of Water —At the twentieth meeting of the Society for the Care of the Public Health, at Stuttgart, in September, Flügge's opinions were embodied in the following conclusions 1 The usual hygienic consideration of water, based solely on the clinical, bacteriologic and microscopic examination *of submitted samples are in almost* all cases worthless 2 A single examination of a water must consist first of an inspection and an expert investigation of the source and nature of the surroundings In many cases this alone will decide as to its safety for use Usually a rough, physical examination and a determination of the iron and the hardness are a desirable addition Seldom is a further clinical, bacteriologic or microscopic examination necessary to make the decision sure In case of a new supply of ground water the freedom from germs must be especially assured 3 For the continued control of water supplies, the bacteriologic and sometimes the clinical analysis is advantageous The hygienic importance of noteworthy results of analysis is generally to be gathered only from the repeated inspection and examination of the sources of supply —*Deutsche Medicinische Wochenschrift*, Oct 31, 1895

The House We Live In.—This is the advice of the late lamented Prof J M Coates "Think deliberately of the house you live in, your body, make up your mind firmly not to abuse it, eat nothing that will hurt it, wear nothing that distorts or pains it, do not overload it with victuals or drink or work, give yourself regular and abundant sleep, keep your body warmly clad At the first signal of danger from the thousand enemies that surround you, defend yourself Do not take cold, guard yourself against it, if you feel the first symptoms, give yourself heroic treatment, get into a fine glow of heat by exercise, take a vigorous walk or run, then guard against a sudden attack of perspiration This is the only body you will ever have in this world A large share of the pleasure and pain of life will come through the use you make of it Study deeply and diligently the structure of it, the laws that should govern it, and the pains and penalties that will surely follow a violation of every law of life or health"—*Indian Med Rec*

Boiled Water a Preventive of Autumnal Fevers —The *Bulletin* of the Tennessee State Board of Health, for November 20th, contains a discussion of the prevention of the fevers that follow a hot and dry summer in the southern belt of States From the first settlement of Tennessee and the surrounding States it has been noted that a long, hot, dry summer or autumn was the sure precursor of the unusual prevalence and virulence of malarial fever This axiom has never failed in its forecast It is equally true now as it was in the early quarter of the *present century* Those who have been wise, even from earlier days, have found their *advantage* in the boiling of their drinking water Moreover, it is *now* known that the great prevalence of the fevers of the fall is not dependent wholly upon the climate, high temperature and decaying vegetation, but more upon the condition of the water supply in the regions affected *To quote* the pen-picture as sketched in the *Bulletin* "The long continued drought converts beautiful creeks into rocky beds, with loops of *stagnant pools* The springs often go dry The wells are almost empty Thus the water becomes foul from seepage, and no longer fit for drinking" It is *important*, therefore, to press home the simple preventive measure of water boiling upon the attention of the millions inhabiting the richest fields of the South and *Southwest* This vast region has been captiously condemned by many writers because of the *autumnal fevers* '*It* has been pronounced a malarial cursed region always doomed to mental *inferiority thereby* In all districts above described, the practice should be universal of *boiling all water* intended for drinking also this water should be cooled in covered vessels, thus avoiding contamination by any impurities in the atmosphere" The closing paragraph of the *Bulletin* is, in effect, as follows "If this simple and cheap means of changing very unhealthy water into innocent drink were universally adopted in all the malarious districts throughout Tennessee, the country would be as free from malarial affections as are the cities In our cities the few cases of autumnal fever that occur, especially if they be called typhoid, attract much attention and alarm In the country they are hardly noticed, because of their common occurrence At present, it may be safely affirmed that a hundred thousand Tennesseans, or neighbors, living within a city, are in better health than the same number dispersed through the hills and valleys of two or three beautiful counties In the city sanitation has become a main object with the people In the country they are still asleep" *Boil the water*

Health Reports —The following health reports have been received by the Supervising Surgeon General, Marine-Hospital Service

SMALLPOX—UNITED STATES

Arizona Nogales, Dec 1, 1 case
Michigan Detroit, Rochester and Park townships, Nov 23 to 30, smallpox reported
Louisiana New Orleans, Nov 23 to 30, 11 cases, 1 death

SMALLPOX—FOREIGN

Nogales, Mexico Dec 1, 1 case
Madrid Nov 12 to 19 9 deaths
Montevideo Oct 26 to Nov 2 8 cases, 1 death
Odessa Nov 9 to 16, 7 cases 1 death
Rio de Janeiro Oct 19 to Nov 2, 130 deaths
Rome Nov 14 to 21, 1 death
Rotterdam Nov 18 to 23, 4 cases
Warsaw, Oct, 26 to Nov 16, 2 deaths

CHOLERA—FOREIGN

Bombay Oct 29 to Nov 5, 6 deaths
Calcutta Oct 19 to 26, 86 deaths
Ceara Oct 24 to 31, 2 cases, 2 deaths
Osaka and Hiogo Oct 26 to Nov 2, 1 death
Yokohama Oct 25 to Nov 1, 4 cases, 4 deaths

YELLOW FEVER—FOREIGN

Cienfuegos Nov 24 to Dec 1, 4 deaths
Rio de Janiero Oct 19 to Nov 2, 18 deaths
Vera Cruz Nov 21 to 28, 1 death

RIO DE JANEIRO, Nov 5 1895

Supervising Surgeon General WALTER WYMAN, SIR I have the honor to remit report for the week ended Nov 2, 1895

There were ten deaths from accesso pernicioso, an increase of 2 9 from yellow fever an increase of 5, 54 from smallpox, a decrease of 26, 2 from Beriberi, a decrease of 2, 8 from enteric fever, the same as in the foregoing week, 45 from tuberculosis, a decrease of 10, and none from measles or whooping-cough From all causes there were 338 deaths, a decrease of 65

Yellow Fever—With the late increase in the temperature, there are appearing more cases of this disease, though, as yet, there is nothing to cause alarm, there appears to be a general uneasiness on this subject

Smallpox—In this week there is a great decrease both in deaths and cases of this disease, though it is still rife enough, and in the last three days it is still declining, what was to be expected with the hot weather In Victoria it still persists though it is further toward the equator, to the south and in the interior towns it is declining according to telegraph reports Respectfully yours,

R CLEARY, M D,
Sanitary Inspector, M H S

NECROLOGY

EPHRAIM W BULL, M D, of Concord, N H, died Sept 27 in the ninetieth year of his age He was a benefactor of his fellow countrymen in the discovery of the Concord grapevine and some others not so well known A writer in the *Independent* writes of his career as follows "Dr Bull was a native of Boston and physician there until ill health compelled him to give up his practice, in 1862, and remove to Concord, where he bought a small place about a mile from the station He was a lover of flowers and fruit and a close observer of nature The stories differ as to how he discovered the parent of the Concord vine The common one has been that Dr Bull noticed a wild vine of the *Vitis Labrusca* species growing on a fence, the fruit of which seemed a great favorite with the birds The skin of the berries was thin and tender and the flesh sweet and pulpy He removed it to his garden where it still remains, and grew thousands of seedlings from it, one of which became the Concord A visitor to the place has stated that Dr Bull told him he found the original vine on the place, removed there by a former owner Another account says that the Concord itself was the vine found growing along a woodland path However, the fact remains that it was Dr Bull who long and patiently experimented to improve and make the best of the native vine"

J Edwin Michael, M D, dean of the University of Maryland, died at his home in Baltimore Dec 2, of Bright's disease Dr Michael was born in Hartford county, Md, May 13, 1843 His parents were extensive land owners After receiving his early education in the schools of the county and being prepared for college by a private tutor, he entered Princeton, graduating in the class of 1871 He then came to Baltimore and entered the medical department of the Maryland University, from which he graduated in 1873 He was not known as a brilliant student at first, failing twice in anatomy, the branch he afterward made his specialty After leaving the University he traveled through Europe, taking courses in medicine in Vienna and Wurzburg On his return to this country Dr Michael settled in Baltimore, where he built up a large practice In 1876 he was elected demonstrator of anatomy in the University of Maryland and professor of anatomy and clinical surgery in 1880 In 1890 he was elected to the chair of obstetrics, immediately following his election to the deanship of the University He was a member of the American Surgical Association and ex president of the Clinical Society of Maryland At the time of his death Dr Michael was president of the Medical and Chirurgical Society of the State

David M Miller, M D, of Elizabeth, N J, who died at his home Dec 3, was prominent as a surgeon in Union and adjacent counties of his native State He was born in 1858 in Jersey City, and educated in arts at Princeton College, and obtained his medical degree from the College of Physicians and Surgeons, New York, in the class of 1883, and soon after settled permanently in Elizabeth

Prof Voitov —The death is reported from the Crimea of M Voitov, Professor of Bacteriology in Moscow, who has fallen a victim to his favorite science

Luther Pattee, M D, of Manchester, N H, died Nov 27 He was born in Warner, N H, Dec 1, 1831, and was the son of Asa Pattee of that place After a thorough preparation under the direction of various medical men he entered the medical school at Woodstock, Vt, from whence he was graduated in 1853 After practicing medicine in Canada for several years he removed to Manchester, where he remained until 1870, at which time he went to Boston After practicing in that city nearly five years he returned to Manchester, where he has since resided

A J Saylor, M D, of Frankfort, Ind, Dec 1, aged 45 —— John A Jones, M D, of Mansfield, Ohio, Dec 3, aged 64 He leaves an estate valued at $200,000 ——A J Hobart, M D, of Columbus, Iowa, Dec 6, aged 67 ——H K Palmer, M D, of Pueblo, Colo, Dec 7, aged 65 He was a brother of Senator Palmer, of Illinois

SELECTIONS

Physicians in the French Ministry —The new French Ministry includes three representatives of the medical profession M Berthelot, the Minister for Foreign Affairs, is a member of the Institute and of the Academy of Medicine, he took the M D, degree in 1865 M Viger, the Minister of Agriculture, and M Combes, Minister of Public Instruction, are also Doctors of Medicine MM Berthelot and Viger have each already formed part of several ministries M Combes, who now for the first time holds a portfolio is Vice-President of the Senate, in which he sits for the Charente Inférieure —*British Medical Journal*

Military War Trains —The Canadian Pacific Railway, after many months of labor, has constructed at an enormous cost two special military or war trains, comprising fourteen cars for men, two cars for cooking, two Pullman cars for officers, two cars for arms and stores, and two dining cars The officers' cars are luxuriously fitted out, and contain state rooms, lavatory, smoking room, etc Each train is composed of eleven cars and engine, and gives ample sleeping accommodations for 306 men and 15 officers, although over 100 more men could find room The men's cars are well finished and furnished with modern improvements The kitchen car has all the utensils of a large sized hotel, and requires six cooks and two helpers This one car can turn out over one thousand five hundred meals a day During a trip from Halifax to Vancouver on the war train, 5,500 meals for officers and men were prepared The Canadian Pacific Railway expect to cover the distance from the Atlantic to the Pacific in five and a half days —*British Medical Journal*

Anthrax Septicemia in Man —Blumer (Bulletin of the Johns Hopkins Hospital, vol vi, Nos 54 and 55) describes an unusual case of anthrax septicemia in a man, associated with acute endocarditis and peritonitis due to anthrax bacilli The patient was a laborer 59 years old, employed in a hair factory, who scratched his right eye with his hand while working with hair from South America The following day the eye was swollen and on the second day still more so By means of incision a thin fluid was obtained from the eyelid which was found to contain anthrax bacilli in pure culture Four days after the onset of the swelling, there was some fever while the edema had extended over the face and head, especially the right side A day later, symptoms of interstitial disturbances and of peritonitis developed Death occurred six days after the first sign of any swelling about the eyelids had made its appearance At the autopsy there was found, in addition to the edema of the subcutaneous tissue, a recent vegetative mitral endocarditis, a serohemorrhagic peritonitis, and acute anthrax lesions of the intestines The bacteriologic examination showed anthrax bacilli in the heart's blood, the spleen, the peritoneum, the liver and the lung The especially interesting features in connection with this edematous form of anthrax, which is certainly very unusual in this country, are the clinical symptoms of intestinal lesions and peritonitis and, anatomically, the development of an anthrax endocarditis upon a previously normal valve

A Case of Tuberculous Parenchymatous Keratitis —Zimmermann (*v Graefe's Arch f Opthalm*, Bd XLI, No 1) records a case of parenchymatous keratitis which he observed clinically and subsequently subjected to microscopic examination The clinical course was that of a parenchymatous kerato-iritis, while the microscopic findings showed a well-marked tuberculosis of the cornea, the sclera, and the iris, the posterior portion of the eye being free from tuberculous changes Except some ozena there were no other disturbances in the health of the patient, who was free from heriditary influences The espscially interesting feature in this case is the demonstration of a well marked tuberculosis in the cornea with giant cells and tubercle bacilli In spite of the negative clinical history and objective examination the author believes that the process is not due to a primary, but to a secondary infection of the eye

MISCELLANY

Fatality from Overeating —The New York papers contain an account of a remarkable case of gluttony with a tragic ending Last Sunday a man indulged in seven pickled pig's feet, or "Trilbys," as they are called Twenty-four hours later he was dead, *causa mortis* acute indigestion and colic

Increasing Volume of Medical Work by Missionaries —The Church Missionary Society is one of the largest and best endowed of the organizations of that kind in England and in the world It is constantly making use of the medical man as a missionary and conservator of their forces in the numerous fields in the uncivilized world In 1894 there was a considerable hospital extension, there were 5,000 in-patients under hospital treatment, and 870,000 out patients These are probably the largest annual totals ever presented by this or any other similar society

Tuberculosis Loves a Shining Mark —The fell leveler phthisis has his relentless hold upon the brother of the Czar of all the Russias, and the condition of that prince is precarious The following is the latest item of news by cablegram

Drs Simanovski and Sheresleffski, court physicians, have been summoned to Abbas-Tuman, in the Caucasus, to attend the Grand Duke George, the czarowitz, whose condition has become very much worse The dowager czarina, the grand duke's mother, and her daughter, the Grand Duchesse Xenia, and her husband, are also hastening to the czarowitz' bedside

Bad Basis for Expert Opinion —It is not competent, the Supreme Court of Minnesota holds, in the case of Miller v St Paul City R Co, decided Oct 15, 1895, for a medical expert to give in evidence an opinion as to the cause of a person's physical condition or injuries, based in part upon information which he has derived from private conversations with a third party The opinion rejected in this case was based on an examination made by the expert on the morning of the day it was given and on the statement and the history of of the case which the attending physician furnished him at the time the examination was made

Medical Counts and Barons —Among the titled personages of France who have gone into medical pursuits are Baron Henri de Rothschild, Counts de Sinety and Goyan, and the Duke de Rivoli The *Gaulois* states of the Count de Goyan that he is a prominent royalist, formerly a member of the Chamber of Deputies, and has taken the degree of Doctor of Medicine at the Paris Faculty with the object of giving himself up to the treatment of the sick poor In this, Count de Goyan has followed the example of the Duc de Rivoli (also a former Deputy), Count de Sinety (member of the Jockey Club), and M Rembielinski (well known in Paris society) All these gentlemen began the study of medicine after the age of thirty, and went through the prescribed course, passing their examinations and taking their degree in the ordinary way Baron Henri de Rothschild, who is also preparing for the medical profession, entered himself as a student when very young He has a pronounced taste for surgery, and his present intention is said to be to found a surgical hospital at his own expense

Albany Medical College Alumni Association of Greater New York —A large number of representative medical men, many of them prominent in this and adjoining cities who are graduates of the adjoining Albany Medical College, met at the residence of Dr Horace S Hanks on Madison Avenue on the evening of Dec 5, and organized an association with the above title The following officers were elected President, Dr John W Warner, Vice-President, Dr Horace S Hanks, Secretary, Dr Warren C Spaulding, Assistant Secretary, Dr Robert F McFarlane, Long Island City, Treasurer, Dr Allen S Fitch Governors, Dr Henry F Müller, of Brooklyn Dr L N Lanehart, of Hempsted, L I, Dr Robert E Finney, Dr John A Cutter, of New York Inasmuch as there are over 100 graduates in greater New York these gentlemen feel a certain pride in honoring their alma mater and have taken this course to do so The first annual dinner is to be given Thursday, Jan 9, 1896

Bacteriology and the Farmer —The address on medicine at the annual meeting for 1895 of the Canadian Medical Association was delivered by Dr Edward Farrell, of the Halifax Medical College His discourse led him to a consideration of the rapidly increasing money value of bacteriology as a utilitarian, rather than a purely scientific pursuit In order to show what science can do in building up a trade, he called attention to the extraordinary fact that Denmark at the present time almost controls the market of England in the supply of the best articles of butter The farmers of Denmark have no special advantage over the farmers of England other than this, that in Denmark the government has established scientific schools in which the subject has been closely studied Their bacteriologists have succeeded in isolating the various types of germ that produce special changes in the course of butter production, and by the artificial application of these they control and direct the fermentive process Dr Farrell urged upon the association that, inasmuch as medicine had given bacteriology to the world, the association was in duty bound to urge upon the government the advantages of schools of experimental science constructed upon a liberal plan and generously supported Regarding the details, wherein the bucolic and pastoral interests are linked with the work of the bacteriologist, the address made some reference The interesting whole may be read in the *Montreal Medical Journal* for September, of which the following is a part

In most countries it is the farmer who is the real wealth producer In this country farming is by far the most important industry, to it we look for the production of the food supply of the world When we consider the enormous amount the export of the product of the farm returns to this country we can gather some idea of the immense importance that agriculture is to us It is not necessary, then, to prove that everything that tends to give a more successful yield to the labor of the farmer should claim the special attention of the government I am glad to see that the fact is being recognized, though slowly, that the pursuit of agriculture requires an education in science, and so we find that schools of agriculture, experimental farms, and other means of teaching scientific farming are growing up among us But we are only waking up to the importance of this special scientific training, and though we lead the mother country in this respect (for this subject is to a large extent neglected in England), still we are only making a small part of the effort that should be made in this direction In many European countries, by reason of the fact that science is fostered and supported by the government, its influence upon agriculture, manufacture and the arts is more quickly recognized and applied than in England or America This new science of bacteriology has an especial relation to agriculture As we now know that bacteria have a direct influence upon human life and its diseases, so the life of other animals and plants must be equally under the power of bacterial growth To show the extent to which this is true it is only necessary to name some of the diseases of animals that are known to be due to microörganisms, such as glanders, tuberculosis with its poisoning power on meat and milk, anthrax or wool-sorters' disease, actinomycosis or lump jaw In addition to these there must be other diseases due to bacteria in the various animals used for human food and the raising of our food products in a perfect and healthy form is most important to the trade interests of the country Then there must be the special bacteriology of each plant with its various blights, a thorough knowledge of which must be necessary to successful agriculture The products of the dairy, butter and cheese, are governed in the changes that take place in their manufacture by what is known as fermentation We now know that this fermentation is a complex process brought about in its different forms by various kinds of microörganisms and that each organism has the power of influencing the color, taste and quality of the product"

The Journal of Experimental Medicine (Quarterly) —Messrs D Appleton & Co, of New York, announce that in January, 1896, will appear the first number of *The Journal of Experimental Medicine*, a periodical devoted to original investigations in physiology, pathology, bacteriology, pharmacology, physiologic chemistry, hygiene and practical medicine Dr William H Welch, Professor of Pathology in the Johns Hopkins University, is to be the editor of the new journal and with him will coöperate a board of twelve associate editors as follows,

For Physiology—H P Bowditch, M D, Professor of Physiology, Harvard University, R H Chittenden, Ph D, Professor of Physiologic Chemistry, Yale University, W H Howell, M D., Ph D, Professor of Physiology, Johns Hopkins University

For Pathology—J George Adami, M D, F R C S, Professor of Pathology, McGill University, W T Councilman, M D Professor of Pathologic Anatomy, Harvard University, T Mitchell Prudden, M D, Professor of Pathology, Columbia College

For Pharmacology—John J Abel, M D , Professor of Pharmacology, Johns Hopkins University, Arthur R Cushny, M D , Professor of Materia Medica and Therapeutics, University of Michigan, H C Wood M D , Professor of Materia Medica, Pharmacology and Therapeutics, University of Pennsylvania

For Medicine—R H Fitz, M D Professor of the Theory and Practice of Physic, Harvard University, William Osler, M D , F R C P , Professor of Medicine, Johns Hopkins University, William Pepper, Professor of the Theory and Practice of Medicine, etc , University of Pennsylvania

In addition to the above forty-two gentlemen have consented to act as "collaborators"

Practical Notes

Extirpation of the Spleen—Schalita (*Arch f Kl Chirurg*, Bd XLIX, H 3) describes a case in a woman, 36 years of age, who had always been well, but in whom there had gradually developed a fluctuating tumor in the region of the spleen that filled the larger part of the left half of the abdomen A laparotomy was made in the linea alba, and a large quantity of fluid of a brownish color was evacuated through a trocar Splenectomy was then made and recovery ensued The tumor, which was as large as a man's head, was attached to the inferior surface of the spleen This tumor or swelling is regarded as the result of hemorrhage either from the rupture of an aneurysm of a branch of the splenic artery or from a subcapsular hemorrhage due to other causes, in consequence of which the cyst gradually formed Examination of the blood for some time after the splenectomy did not show any changes in the corpuscles

Treatment of Pneumonia by Digitalis—The author, who has tried in sixty-four cases the treatment of pneumonia by digitalis according to the method of Petresco (de Bucarest), sums up the results he has obtained under the form of the following conclusions

1 Digitalis in large doses forms one of the most powerful therapeutic means against pneumonia

2 It causes a favorable action on the heart, lungs and blood

3 In large doses, digitalis shortens the duration of pneumonia and gives an increase of the leucocytes

4 A dose of one gram of the powdered leaves, and daily doses of four to five grams, are borne without convenience

5 Hydrotherapy (cold water) assists *in these conditions* the action of the digitalis—Naegeli-Akerblom *Centralb f Innere Medic* 1895 No 32 *Revue Internationale* No 22

Diseases of the Prostate—Dr Gabriel Colin ends a general review on the treatment of diseases of the prostate in the *Revue Internationale de Médecine et de Chirurgie Pratiques*, with the following conclusions

1 It is important to be able to promptly diagnose prostatic hypertrophy, and to employ from the beginning such vigorous treatment as will arrest the disease or cause it to retrograde in its progress If the bladder empties itself easily, a medical and hygienic treatment will be sufficient, if it does not, one will have to have recourse to catheterism, repeated frequently, so that the bladder may never become overdistended

2 In case of enormously enlarged prostate, great difficulties in catheterism, false passages, retention with distension, free hematuria, or serious infection, catheterism, Guyon's *mandrin sonde a demeure* will almost always suffice to meet these accidents

3 When it is well proven that these methods have failed or are insufficient (but only then) a more active surgical interference should be attempted We have the choice, according to the case, between the operations that we have studied (exceptional operations for exceptional situations)

Such are, I believe, the rules and the course to be followed by every conscientious physician, bearing in mind that we ought to go from the simple to the compound, commencing by the ordinary and current methods before proceeding to more serious interventions, and that it is the duty of every surgeon to operate without hesitation when he has the proper indications, but always to wait for these

The recent operations, of which we have said some words, do not permit us to lose sight of what we may deduce from the old and methodic treatment, the rules of which have been so masterly studied by Prof Guyon Imbued with these principles, we will be prepared in the present state of urinary surgery and therapeutics to afford the most important aid to our sufferers from prostatic diseases

Poisoning by Creolin—Dr O Pinner, physician to the Jewish hospital at Hamburg, reports in the *Deutsche Medizinsche Wochenschrift* what he believes to be the seventh recorded case of poisoning by creolin His case was that of a female 60 years of age, who had attempted suicide by swallowing seventy-five grams of creolin It was at first not known which of the preparations called creolin had been taken, but the druggist from whom it was purchased subsequently stated that he only sold Pearson's The woman was found unconscious in her room and was taken to the hospital two hours after the attempt on her life She was then comatose, with livid face, moist skin and blue lips, her right pupil was larger than the left, and there was no reflex action on the cornea Her temperature was 36 6 degrees C , her pulse 112 and regular, and her respiration deep and snoring, with tracheal rales In the pharynx there was a large quantity of white mucus, the palatal arches and the posterior wall of the palate were covered by a grey superficial coating There was a strong smell of creolin in the breath By the stomach-pump 300 grams of a thick, grey fluid mixed with mucus were withdrawn, and pressure on the pylorus caused thick, brown drops of pure crolin to come through the tube The first urine (150 grams) was of a light yellow color, without albumin, sugar or indican, the bromin water test showed traces of tar acid in it Microscopic examination revealed nothing abnormal Milk given through an esophageal tube was immediately vomited, but was eventually retained

An hour after admission into the hospital there were well-marked symptoms of shock, for which injections of ether were successfully made There were also copious diarrhea, and the stools had an odor of creolin Some hours later the patient regained consciousness and afterward became better She complained of severe pain in the epigastric region and in the pharynx The urine (80 grams) was now of a dark green color, had an odor of creolin, and contained traces of albumin, by the tribromphenol reaction it was estimated that 7 5 c c of tar substances were present in 100 c c There was no hemoglobinuria, and only a small quantity of leucocytes and red corpuscles and some casts The patient slept very well during the first night, and on the following day there was an obvious improvement, the pulse temperature and respiration being normal, although she still complained of headache, want of appetite and hoarseness, and an erosin on the epiglottis and the arytenoid cartilage was observed with the laryngoscope *On the fourth day there was more* diarrhea, the stools still smelling of tar products The urine continued for a week to be of a green color and contained 1-5 per cent of albumin, with much indican After four weeks the patient was able to leave the hospital in perfect health and did not show *any trace of injury from the poisoning* Notwithstanding the alarming symptoms of the first few hours, the patient very soon recovered, the creolin being obviously removed by the kidneys, which, though disordered for a short time, did not sustain any permanent injury. Creolin, therefore, according to Dr Pinner, must be regarded as a comparatively innocuous substance, although it is remarkable that such extremely severe symptoms followed almost immediately after the poison had been swallowed Creolin, he says, used to be considered harmless because it could not be absorbed by the stomach, but in the above case the gastric juice very soon transmitted the creolin into a form which very quickly passed into the circulation and appeared after two hours in the urine

Death of One of Koch's Earliest Tuberculin Patients—Dr J G Adami, Professor of Pathology at McGill University, has given to the *Montreal Medical Journal*, September, an account of the autopsy made by him upon one of the first patients treated by tuberculin in 1890 The patient was nearly a year under Koch's treatment at the Victoria Hospital of Berlin, and under the usual periodic inoculations with tuberculin he began to regain appetite and body weight, his night-sweats passed away, and his general health appeared to be restored The patient, a native of Finland, aged 33 years, a highly intelligent man, a skilled mechanic in engineering, was taken down for the first time early in 1890 with cough, hemoptysis night-sweats and progressive emaciation The patient from Berlin went to Finland and thence, in 1893, to Montreal He remained apparently in perfect health until January of this year, when the cough returned, and all the old symptoms—night sweats loss of flesh and bodily weakness In March there was an hemoptysis, about half a gallon of blood being lost, there were two other severe hemorrhages later From this time until April 18th, he being now a patient at the Royal Victoria Hospital, there was constant slight expectoration of blood with but little cough On this last date severe hemorrhages recurred, in all about a quart of blood being lost Following upon this, there was rapid loss of vital power, and the patient died ten days later At the autopsy it was noticeable that there was no indication of tuberculosis other than in the lungs, save for some quite recent and minute ulcers in the jejunum and ileum The lungs, however, presented very characteristic tubercular changes There were firm adhesions at both apices—so firm that on the left side the knife had to be employed to separate them Both apices showed old tuberculosis in the shape of well encapsuled caseous masses and small contracted cavities with dense envelopes and smooth but uneven internal aspect In addition, the upper two-thirds of the uppermost lobe of the right lung and the upper half of the upper lobe of the left lung were greatly consolidated contracted and presenting very well marked interstitial fibroid change Here evidently in both apices were to be seen the results of treatment in 1890-91—abundant signs of arrest of the tubercular process It was, however, clear that the process had only been arrested—for the rest of the lung tissue was the seat of numerous rather large miliary tubercles, which from their distribution were broncho pneumonic—distributed along the course of sundry bronchi Injecting the pulmonary arteries with water led to the escape of the fluid through one of the main bronchi of the upper lobe of the left lung Following this up a long cavity was entered into containing a globular laminated clot over what was the seat of rupture of the artery Some difficulty was experienced in finding the actual lesion, the artery filled with thrombus escaping detection for some little time Bringing all these facts together it would seem most probable that the second attack of advancing tuberculosis was not a second infection, or infection anew, but originated in the old arrested foci of the disease, where the process lighting up again in the walls of one of the old incompletely contracted cavities had been followed by dissemination of the virus throughout the air passages, and had prepared the way for rupture of arteries passing along the walls of the cavity

Hospital Notes

The annual report of the Mercy Hospital, conducted by the Sisters of Mercy, in Chicago, shows that 1,378 patients have been treated during the year ——At a meeting of the trustees of the new Western Hospital for the Insane held in Springfield, Ill, Dec 9, it was decided to erect the institution in Rock Island The site is said to be the handsomest one for hospital purposes in the State

Society Notes

The Third International Congress of Psychology will take place at Munich, Aug 4-7, 1896 President, Prof Stumpf, Berlin, Vice President, Prof Lipps, Munich, General Secretary, Dr Schrenck-Notzing, Munich The International Committee of Organization includes the names of many of the most distinguished psychologists of the world Bain, of Scotland, Baldwin, of Princeton, Bernheim, of Nancy Delboeuf, of Brussels Donaldson, of Chicago, Ebbinghaus, Breslau, Ferrier, London, Fullerton, Philadelphia, Stanley Hall, Worcester, Hitzig Halle, James, Harvard, Lehmann, Copenhagen, Liégeois, Nancy, Witmer, Philadelphia, Mendelssohn, St Petersburg, Monokow, Zurich, Morselli, Genoa, Myers, London, Newbold, Philadelphia, Preyer, Wiesbaden, Richet Paris, Schäfer, London, Sedgwick Cambridge, Sully, London, Ward, Cambridge The invitation to membership is extended to all interested in psychology, and the membership fee is 15 marks The work of the Congress is to be carried on in four Sections, viz Psychophysiology, including cerebral anatomy and physiology, and psychophysics, Normal Psychology, Psychopathology, Comparative Psychology Those interested in the work of the Congress and desirous of learning the details of the preliminary program will receive the invitation and announcement on sending name and address to Dr C G Chaddock, 610 N Garrison Avenue, St Louis, Mo

Mitchell District Medical Society —The midwinter meeting of this Society will be held at Bloomington, Ind, Thursday and Friday, Dec 26 and 27, 1895 A sufficient number of papers have been promised to insure the success of the meeting The address on the evening of the 26th will be delivered by Prof Daniel R Brower, of Chicago, on ' The Marks of Disease in the Habitual Criminal and the Remedy, Illustrated by the Stereopticon " The program will be issued Dec 20 ——The annual meeting of the Syracuse, N Y Academy of Medicine was held Dec 3 The following officers were elected for the ensuing year President, John Van Duyn, First Vice President, Eli Van de Warker, Second Vice President, D M Totman, Secretary, T H Halsted, Treasurer E L Mooney ——The annual meeting of the Baltimore and Ohio Association of Railway Surgeons was held in Pittsburg Dec 3 The following officers were elected President, J M Spear, Cumberland, First Vice President, S S Good, Meyersdale, Second Vice President P B Short, Secretary and Treasurer, J A McKean ——The monthly meeting of the McLean County Medical Society was held in Bloomington, Ill ——The fifty-first semi annual meeting of the Northwestern Ohio Medical Association was held at Findlay, Ohio, Dec 12 and 13 ——The sixty-first annual meeting of the Fox River Valley Medical Association was held in Aurora, Ill Dec 10 Officers were elected as follows President, H W Richardson, Marengo, Vice President M M Robbins, Aurora, Secretary, J W Bumstead, Dundee The next meeting will be held in Elgin

Detroit Notes

The Children's Free Hospital is now assured, thanks to the $125,000 that the noble philanthropic citizen Mr Hiram Walker gave, which gift he has set aside for the purchase of the ground and building, and whatever surplus remains, to be devoted to current expenses The Children's Free Hospital Association was first organized in 1886 and was connected with Harper Hospital, but as the facilities were inadequate, it was moved to a large building corner of Seventh and Fort Streets The Association is under the government of a Board of lady residents well-known in the noble work of charity, assisted by an Advisory Committee of prominent business men The affairs of the hospital are under the direction of a Superintendent assisted by a head nurse A house physician resides in the hospital During the first year, the hospital cared for 80 children, second year, 136, increasing each year until the number of admissions reached 259 the past year The percentage of children discharged cured each year has averaged from 50 to 60 per cent of admissions improved from 20 to 25 per cent, unimproved about 5 per cent, while the death rate has never exceeded 10 per cent of admissions, which is a strong argument in favor of an institution of this character if one were needed, when it is taken into consideration that the majority of children treated in it would drag along without any medical treatment or tender care bestowed upon them until death relieved them of their misfortune The medical staff is composed of prominent physicians of the city, each a specialist, with Dr C A Devendorf as chief of staff In connection with the hospital there is an outdoor clinic, established in 1893, where patients not sick enough to be admitted to the hospital, yet needing care, are treated free of charge

The proportion of children admitted this year exceeds the average and at present there are 32 children in the hospital under treatment and convalescing, while over 250 have received treatment in the outdoor clinic since Jan 1, 1895 The new hospital, now almost completed, has all modern conveniences The boiler-room being entirely separate from the main building, and all rooms will receive the sunlight The hospital will accommodate 64 children, and will be ready for occupancy April 1, 1896

The Wayne County Medical Society at its regular meeting Thursday, Dec 5, listened to a very interesting paper on "Anesthetics," by Dr Kenneth Gunsolus, in which he took up the discovery, history and use of anesthetics The majority of the members were of the opinion that chloroform was the preferable drug, excepting in such cases as it was counter-indicated

Detroit Medical and Library Association —At the regular meeting of this Association, the secretary, Dr Anderson, read a paper by Dr Charles A Oliver, of Philadelphia, entitled, "The Action of Hydrobromate of Scopoleine Upon the Iris and Ciliary Muscle" Dr Daniel La Ferte read a paper entitled, "Club Foot" The doctor also exhibited a patient upon whom he had operated by the Phelp's method

Health Office Report for week ending Dec 7, 1895 Deaths under 5 years, 31, total 78 Births Male 43, female 41, total 84 Contagious diseases Diphtheria Last report 38, new cases 26, recovered 25, died 9, now sick 30 Scarlet fever Last report 19, new cases 11, recovered 9, died none, now sick 21 Small-pox Last report 2, new cases none, recovered 1, died none, now sick 1

St. Louis Notes

Weekly Report of the Health Office —Report shows a continuance of the direful effect of diphtheria in the occurrence of 17 deaths, and 4 deaths attributable to croup There were 2 deaths from scarlatina, 4 from typhoid, and 1 from cerebro-spinal fever during the week

The St Louis Medical Society —The program for Dec 7 announced a continuance of the discussion of the subject of hematomyelia, demonstrations of a method of diagnosticating diabetes by the condition of the blood, by Dr Ludwig Bremer, and a paper on "How to Cure Acute Middle Ear Disease more Quickly," by Dr Robert Barclay Dr Bremer's demonstration was most interesting as bearing upon the possibility of detecting diabetes under circumstances where there was an object in concealing the disease, as in examination for life insurance The method consists of a staining of the blood which produces a marked macroscopic differentiation between normal and diabetic blood It was claimed that after sugar had ceased to appear in the urine as a result of dietetic measures, by this method it could still be detected in the blood

The City Board of Health has framed a resolution looking to the appointment of a corps of competent physicians whose duty it shall be to make daily visits to the public schools and examine all ailing children, and children that come from homes where sickness exists The prevalence of diphtheria is taken as the warrant for this measure

The Health Commissioner has caused to be printed for gratuitous distribution a pamphlet devoted to a popular exposition of the means of preventing, avoiding, and suppressing communicable diseases, with a resumé of the laws respecting the duties of physicians when in attendance upon cases of contagious disease, as well as of the city ordinances related to the duties of the principals and teachers of private and public schools in such cases Diphtheria is first given attention, and then follow scarlet fever, tuberculosis, smallpox and typhoid fever The public diffusion of knowledge of the duty of physicians and teachers in cases of contagious disease will assist both classes in the performance of what is often a disagreeable task because of the frequent dissatisfaction arising out of the necessity to placard a house or to exclude children from school The pamphlet is most opportune, and can not fail to have a decided influence now and hereafter in restricting the spread of disease

The Missouri State University Laboratory is now well started in the work of producing the antitoxin of diphtheria, under the approval of the State Board of Health The Board is also taking steps to collect statistics concerning diphtheria and the results of the new treatment

The Marion Sims College has been made defendant in a suit to recover anatomic and pathologic specimens, by Dr. Louis Bauer The college asserts that Dr Bauer donated the specimens in question to the college museum, and therefore refuses to release them until ownership is proved

The Barnes Medical College has broken ground on Garrison Avenue for its new building

A New Law concerning the punishment of crimes committed by persons under the age of 18 has received its first application here during the week, and has given rise to some discussion The law is framed to prevent the commitment of youthful criminals to the penitentiary, and to place them in the Reform Schools There can be no question of its general wisdom in cases of minor crimes, but it is pointed out that a boy just under 18 can commit murder in the second degree, and the crimes of arson, criminal assault, and robbery in the first degree, and his punishment be fixed by the law at only three years in the Reform School

The Annual Reunion of the editorial staff of the *Medical Fortnightly* will take place at the Mercantile Club, Thursday evening, Dec 12

Washington Notes

Weekly Report of the Health Office —The report of the Health Office for the week ending Nov 30 is as follows· Number of deaths (still-births not included) White, 63, colored, 44, total, 107 Death rate per 1,000 per annum White, 17.5, colored, 26.0, total, 20.2 Death rate per 1,000 per annum corresponding week last year, 16.2 A slight rise took place in the number of deaths reported at the Health Department during last week as compared with the preceding week The mortality was 107, as against 99 reported the week before The annual death rate was 20.2, which is 3.6 below the annual average for the District of Columbia The notable feature of the week's health history is the continued abeyance of the dangerous contagious diseases, there having been but one death from diphtheria The mortality from brain maladies reached 10, of which 5 were from apoplexy There was a material increase in the deaths from acute lung diseases, 16 of them being from pneumonia and 7 from congestion of the lungs The deaths from typhoid fever were 4, as compared with the same number the preceding week, while in the corresponding week of last year, there were 5 deaths Aside from these exceptions, the general health of the city is favorable, with an annual death rate materially below the normal

Gold Medal for Dr Taylor —Dr Thomas Taylor, of this city, has recently received through the Georgetown custom house a gold medal, which was awarded him by the International Society of Hygiene in recognition of the value of his original investigations on butters and fats and the edible mushrooms of the United States in the interest of hygiene Dr Taylor furnished by request a paper which was read at the last annual meeting of the society, held in Rome, Italy, 1894

Washington Board of Trade —At a recent meeting of the Board of Trade Dr Samuel C Busey was elected a member of the Board of Trustees Dr W P C Hazen has been added to the Committee on Public Health Acting on the recommendation of the Committee on Public Health the Board has appointed a Special Committee to prepare a sanitary code for the District The medical men on the committee are Drs Geo L Magruder, Chairman, and Health Officer W C Woodward

Whisky Inspection —The chemist of the District has completed an analysis of fifty specimens of whisky secured by the Excise Board The research shows an entire absence of

and investigation here, but only the practical study of the chemic processes taking place in the human body in health and disease Adjoining the chemic room on the north is the room devoted to bacteriology, the most active department on account of the importance which bacteriologic investigation has attained in recent years Close attention will be devoted in this work to a study of the conditions under which bacteria thrive and the influences that can be brought to bear to cause their destruction The room is equipped with microscopes of the highest power, and large incubating ovens in which the microorganisms can be safely cultivated The rooms of the Director and Assistant Director, on the second floor, will be used as offices and for their own personal studies On the third floor there is a single large room which will be used in teaching the post-graduate work requiring the aid of the laboratory There are four rooms on the fourth floor One of them is fitted up as a library, and will be used as a meeting-room for the Fellows and Associates of the laboratories At the head of the staff is Dr William Pepper, Director The Assistant Director is Dr Alfred Stengel, and instructor in medicine and assistant physician to the University Hospital The members of the staff are trained specialists, and are as follows Chemical Department, Dr Casper Wistar Miller and Dr George Stanley Woodward, Microscopic Department, Dr Alonzo E Taylor, Dr Thomas S Kirkbride, Jr, Dr J Dutton Steele, Bacteriologic Department, Dr Samuel S Kneass, Physical Department, Dr Joseph Saylor, Dr David L Edsall, Dr Samuel McClintock Hamil

A BANQUET and testimonial was given in honor of Dr John S Billings, who has recently removed his residence to this city and been appointed to the new chair of Hygiene in the Faculty of the University of Pennsylvania, he is also Director of the University Hospital The dinner was given at the Hotel Bellevue, Philadelphia, Nov 30, 1895. Dr L Wier Mitchell presided as chairman and speeches were made by Drs J M DaCosta, S Weir Mitchell, John S Billings, J R Chadwick of Boston, Robert Fletcher of Washington, A Jacobi of New York, and William Osler of Baltimore A list of foreign contributors were read and a cheque for the amount of $10,000 was given to Dr Billings with some most appropriate remarks by the Chairman

THE annual meetings of the Geological Society of America, the American Society of Naturalists, the American Physiologic Society, the Association of American Anatomists, and of the American Psychological Association will be held in Philadelphia, on Dec 26, 27 and 28, in the halls of the University of Pennsylvania Prof E D Cope is Chairman of the Committee on Arrangements, Dr Horace F Jayne Treasurer, and Persifer Feazle Secretary The remaining members being Drs Harrison Allen, Edward J Reichert, and W R Newbold

AN UNUSUAL case was reported to the Academy of Surgery by Dr Thos G Morton at its December meeting A healthy woman, 34 years of age, engaged in house work, sneezed violently and soon afterward appeared much prostrated A few hours later she was taken to the Pennsylvania Hospital in a state of collapse, and she soon died At the autopsy, there was found in the superior aspect of the stomach, near the smaller curvature, a ragged opening as large as a five-cent piece, but without much expulsion of contents of stomach owing to location An unhealed ulcer of smaller size was also found in the vicinity of the first one There had probably been adhesion between the stomach and diaphragm as a result of the ulceration process, and this adhesion was torn apart by the violence of the movement of the diaphragm in the art of sneezing

AT THE College of Physicians, Dec 4, Dr John B Deaver read a communication on "Some Salient Points in the Diagnosis, Pathology, and Treatment of Appendicitis" The paper was based upon two hundred operations for appendicitis performed by the lecturer with only two deaths, both of which occurred in the first series of one hundred cases, giving a mortality of 1 per cent after abdominal section for appendicitis He bases the diagnosis upon the three cardinal points of suddenness of onset, rigidity of muscles upon right side, and pain and tenderness in right inguinal region He had found some cases with pain complained of on left side, and in these cases he had found the appendix toward the left side of the pelvic region The abscess may discharge into the bladder, therefore, the presence of pus in the urine does not always decide the diagnosis in favor of pyonesis When the tip of the appendix occupies the pelvis, symptoms of vesical irritability occur and are of diagnostic value He advocated early operation with removal of appendix before the stage of pus formation He did not think it wise to operate upon a patient in collapse, but where an operation is to be done he advised a thorough operation with removal of the appendix in all cases The practice of simply opening the abscess and draining, he pronounced incomplete surgery He said in conclusion that there is no medical treatment that will cure appendicitis, and quoted Osler's remark that, in these cases, "the surgeon is often called too late but never too early"

THE PUBLIC SERVICES

Surgeon George W Stoner M -H S, sailed for Europe on the *Kaiser Wilhelm II*, last week He will be absent several months

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S Army, from November 30 1895 to December 6 1895

Capt William H Arthur Asst Surgeon, is relieved from duty at Ft Columbus, N Y, and ordered to Ft Myer, Va, for duty

First Lieut John S Kulp, Asst Surgeon, leave of absence granted is hereby extended one month

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending December 7, 1895

Asst Surgeon George C Hubbard detached from instruction at the Naval Laboratory, New York, and ordered to the 'Vermont'

P A Surgeon E R Stitt, detached from the 'New York," and ordered to the coast survey steamer "Bache"

P A Surgeon G H Barber, detached from the "Bache,' and ordered to the "New York"

Marine Hospital Changes Official list of changes of station and duties of Medical Officers of the U S Marine Hospital Service for the fifteen days ended November 30 1895

Surgeon C S D Fessenden placed on waiting orders, Nov 22, 1895

Surgeon F W Mead, granted leave of absence for thirty days, Nov 21, 1895

P A Surgeon W P McIntosh, to proceed from Boston, Mass, to Portland, Me for temporary duty, Nov 25, 1895

P A Surgeon W J Pettus, relieved from duty at Buffalo, N Y, and directed to proceed to Cape Charles Quarantine, and assume command of Station, Nov 16 1895

P A Surgeon G M Magruder, granted leave of absence for thirty days, Nov 20 1895

P A Surgeon T B Perry, relieved from command Cape Charles Quarantine and directed to proceed to Buffalo, N Y, and assume command of service Nov 16, 1895

P A Surgeon W G Stimpson, granted leave of absence for thirty days Nov 20 1895

Asst Surgeon I E Cofer, placed upon waiting orders from Dec 1, 1895, Nov 21 1895

Asst Surgeon J A Nydegger, when relieved from temporary duty at Mobile, Ala to rejoin station at Savannah, Ga, Nov 27, 1895

Asst Surgeon W I S Stewart, granted leave of absence for fourteen days, Nov 29 1885

Asst Surgeon E K Sprague relieved from temporary duty at Key West Quarantine and directed to rejoin his station at Mobile, Ala, Nov 27 1895

Asst Surgeon Emil Prochazka to proceed from Detroit, Mich, to Buffalo, N Y, for temporary duty, Nov 16, 1895

Asst Surgeon J B Greene, granted leave of absence for thirty days, Nov 20, 1895

Change of Address

Blodgett A G from West Brookfield Mass, to Ware Mass

Chancellor L, from 515 Olive Street, St Louis, to 618 Pine Street

Werner O E from Tigerton to Brillion, Wis

Woodbridge John Eliot, from Youngstown, Ohio, to 637 Prospect Street Cleveland Ohio

LETTERS RECEIVED

Ashton, W W Alexandria, La Andrews Edmund, Chicago

Brauns F Chicago, Ill, Battle Creek Sanitarium Battle Creek Mich Barbour Llewellyn P Tullahoma, Tenn

Conibear W H Morton, Ill Caverly, C S, Rutland, Vt Cutter, J A, New York, N Y Cochran, Jerome (2), Montgomery, Ala, Conner Leartus Detroit Mich Chancellor, Eustathius, St Louis, Mo

Dakin, F C Evanston Ill Dudley, E C, Chicago

Edwards John B Milwaukee Wis

Forline H H Chicago Ill, Fehr, Julius, Hoboken, N J

Gouley J W S, New York city Galloway, D H, Chicago

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Nihart G W Mendon Mich Norton, A C, Rockwell City, Iowa

Parke Davis & Co, Detroit, Mich Pugh, F H., Bryan, Ohio Parker E F, Charleston S C Pattee A F Boston Mass Pettit, J W, Ottawa Ill Parish, Orleans, New Orleans La, Paquin The Paul Laboratories (2) St Louis Mo

Rowe S B, St Louis Mo Reed, R Harvey, Columbus Ohio, Risley Samuel D, Philadelphia Pa

Shlensky, I Wilmington, Del Schimmell M S Baltimore Md Silver, D R Sidney Ohio, Scherer, Otto Detroit Mich Sourwine, J D Indianapolis Ind Spaulding, Warren C New York city Smart Chas, Washington, D C Senn, N, Chicago, Sulter, A Walter Herkimer N Y Smith, Q Cincinnatus, Austin, Texas, Simpson, Wm K, New York city

Utley, H M Detroit, Mich

Williamson, A R, New London Conn

The Journal of the
American Medical Association

Vol XXV CHICAGO, DECEMBER 21, 1895 No 25

ADDRESS

THE INTERNATIONAL SCIENTIFIC LANGUAGE

The Annual Address read before the Association of American Medical Editors, May 7, 1895

BY JOHN B HAMILTON, M D, LL D
CHICAGO

Gentlemen of the Association —As I look around me to-day, and see the distinguished membership, I can only say that he who would interest this audience, or inject into our annual meeting a thought out of the common run, must have either extraordinary ability or remarkably good luck I shall therefore only attempt to discuss a question which has been more or less prominent and with which all are more or less familiar

All are not born lexicographers like our brother Dunglison, nor do they achieve lexicography like our brother Foster, or our Vice President Gould, and as for having it thrust upon them—why, that depends on the enterprise of our friends the publishers, and the same may be said of philologists Most medical editors are more concerned with the simple proposition, that in all cases the "nominative case shall govern the verb" in the articles they publish, than in that deeply interesting philologic problem of whether the Chinese and North American, or the Semitic, Indo European and Turanian languages were first to follow the hieroglyphs

The truth is that the progress of science has demonstrated the great advantage—nay, the necessity—for an easier means of communication between the scientific men of the world, than is now found

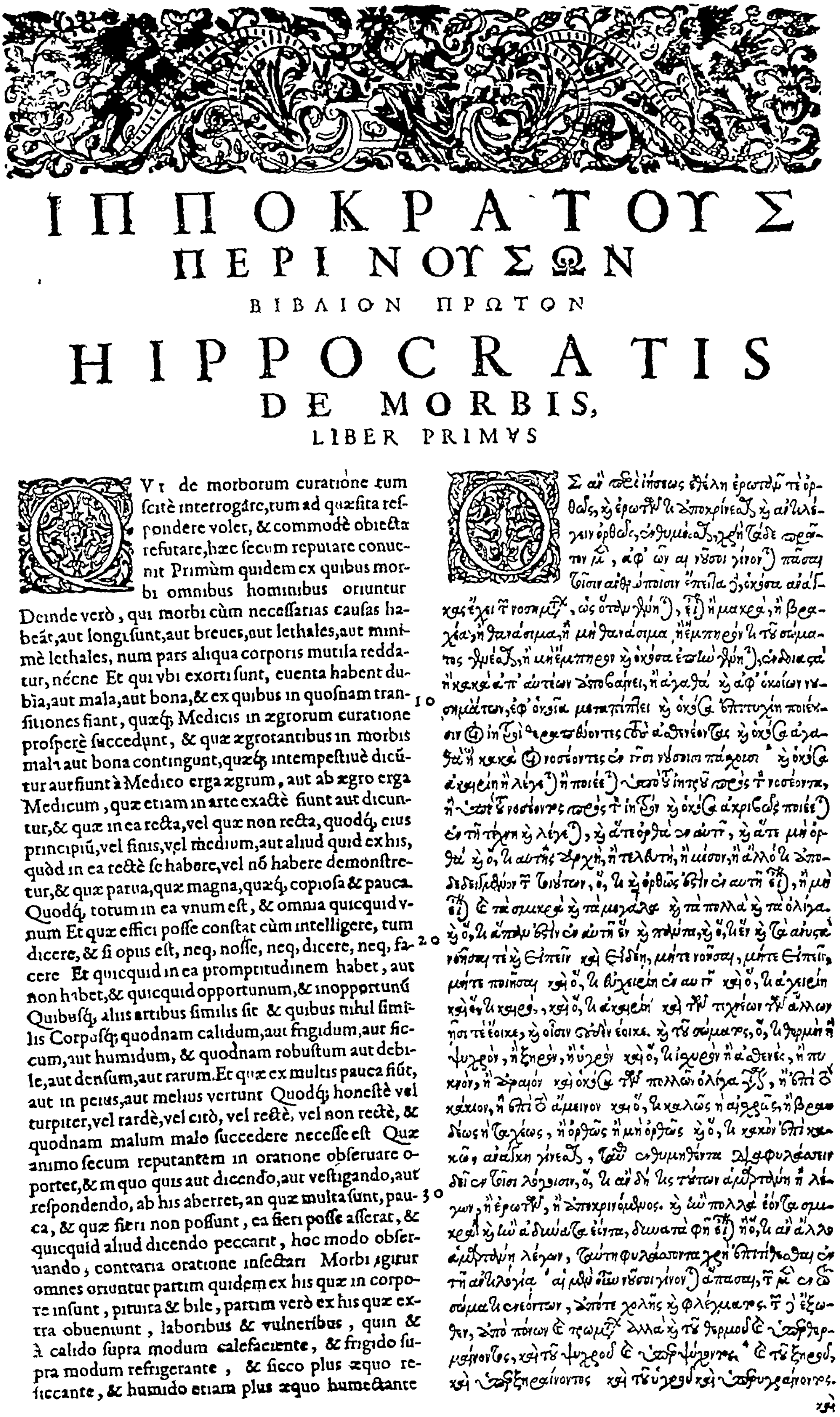
Although at some of our International Medical Congresses the number of official languages have been reduced to three, viz English, French and German, yet even that limitation was not narrow enough to bring all together, for comparatively few are able to understand more than two spoken languages It is granted that it may be done, and that here and there are brilliant linguists in our profession, who not only understand and speak two, but four or five, like our Surgeon General Sternberg of the Army, or Gihon of the Navy, or the laryngologist Braun of Trieste, who seems equally familiar with five languages This admission of possibility does not imply that it is likely that any considerable number of scientific men will ever set themselves to work to memorize the immense vocabulary that is necessary to accomplish such a feat, and there can be no question but one's time might be employed to better advantage if we can only agree upon what particular language we shall adopt

Unfortunately, there are so many side issues The old Adam in men, which makes them selfish, and which selfishness is so often mistaken for patriotism, makes each nation so tenacious, so absolutely certain that each has the very best language that can by any possibility be constructed, that they are but little nearer coming together on the point than they were at the time of the confusion of tongues at the Tower of Babel—and the seeming impossibility of agreement led to the construction of an alleged language called *Volapük* which, up to this time, has been spoken by nobody and only written by doctrinaires The Volapuk is a language that to most men is at once so difficult and forbidding, that it has made little or no progress since first invented by Herr Schleyer in 1879 But when we reflect that it has taken centuries to create the existing languages, we see that the propagandists of Volapük have more to contend against than intrinsic ugliness, lack of harmony or difficulty of acquirement

This inherent slowness necessarily dampens our personal interest, for no one can take a very deep interest in that very remote posterity that may speak Volapuk and enjoy it Naturally then, we turn to the question of whether we shall use a living or a "dead" language The objection to the use of a living language is mainly that it is difficult to secure agreement, although the diplomatists long ago settled the matter by making French the universal language of diplomacy The fate of nations and their international relations are too important to be trifled with, and we see that with few exceptions all diplomatic conventions hold their proceedings in the French language

Dr Achille Rose in this country, and several medical authors in Europe favor Greek The Greek language has constantly undergone changes from its origin As a population has always remained in Greece, it is a mistake to consider Greek as a "dead" language The idea of change is essential to our idea of life, from the seed to the plant in the vegetable world, from the egg to the animal in the animal world, and in language a constant change, as restless, as varying as the waves of the sea This change in the Greek is well shown in the cuts I show you here Plate 1, p 1066, is the fac simile of the first page of the chapter of Hippocrates' "De Morbis," as published by Chouer in Geneva in 1657, and plate 2 is the chapter of Aretæus of Cappadocia, "De Causis et Signis Acutorum Morborum," published at Leyden, 1730, and plate 3 is from the recent work of Georgios A Kostomoire, published at Athens, 1887

This last work is on "The Ophthalmology and Otology of the Ancient Greeks, from the Most Ancient Times Down to that of Hippocrates" One would suppose on general principles, that Hippocrates was ancient enough for all ordinary purposes, but Kostomoire has shown us something of the immense riches of medical literature anterior to Hippocrates It is as well to remove Greek from the list of dead languages, because the Greek language has had a continuous existence from the days of Homer That



ΙΠΠΟΚΡΑΤΟΥΣ
ΠΕΡΙ ΝΟΥΣΩΝ
ΒΙΒΛΙΟΝ ΠΡΩΤΟΝ

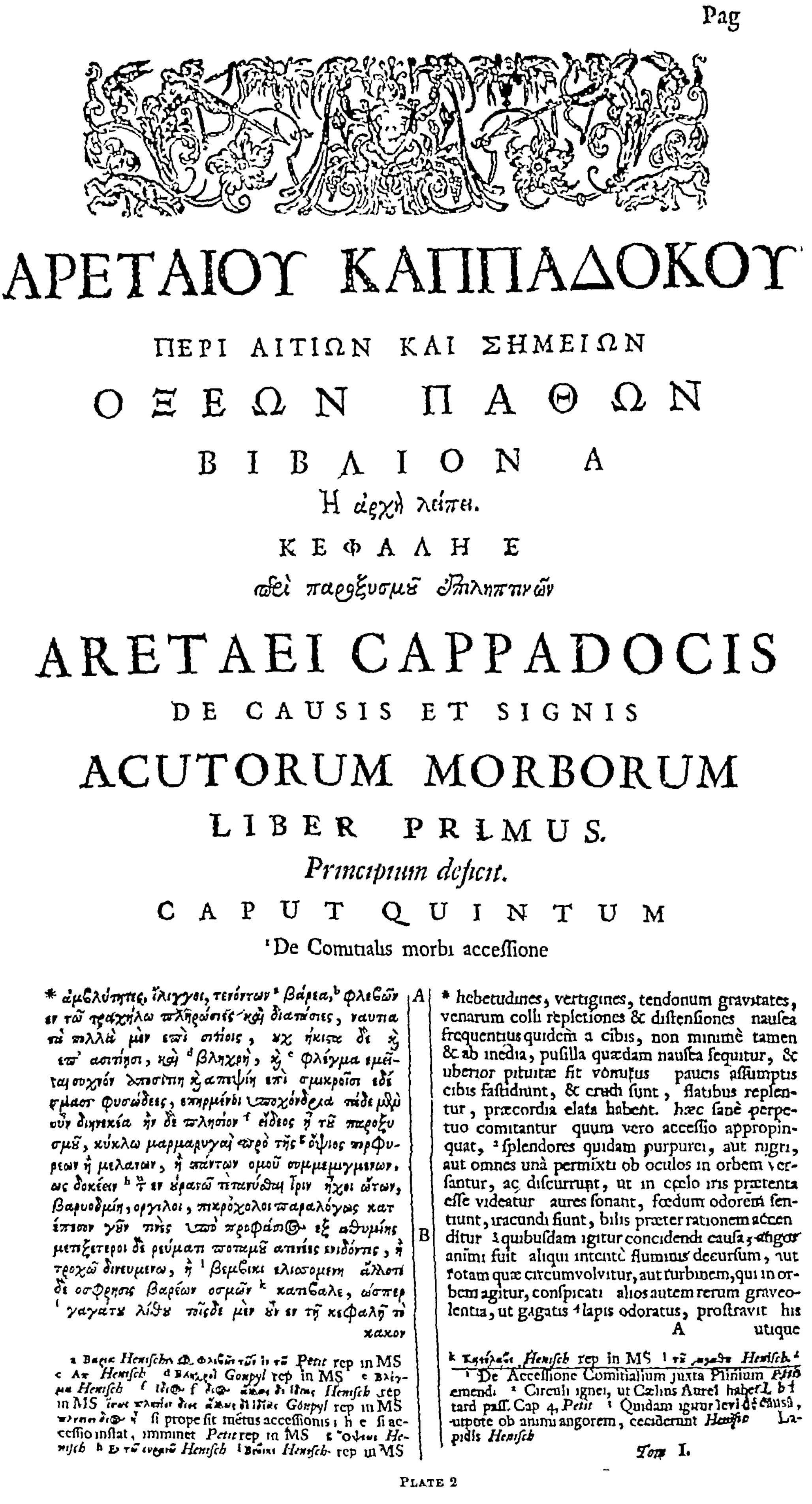
HIPPOCRATIS
DE MORBIS,
LIBER PRIMVS

QVI de morborum curatione tum ſcitè interrogare, tum ad quæſita reſpondere volet, & commodè obiecta refutare, hæc ſecum reputare conuenit. Primùm quidem ex quibus morbi omnibus hominibus oriuntur. Deinde verò, qui morbi cùm neceſſarias cauſas habeat, aut longi ſunt, aut breues, aut lethales, aut minimè lethales, num pars aliqua corporis mutila reddatur, néene. Et qui vbi exorti ſunt, euenta habent dubia, aut mala, aut bona, & ex quibus in quoſnam tranſitiones fiant, quæq; Medicis in ægrorum curatione proſperè ſuccedunt, & quæ ægrotantibus in morbis mali aut bona contingunt, quæq; intempeſtiuè dicuntur aut fiunt à Medico erga ægrum, aut ab ægro erga Medicum, quæ etiam in arte exactè fiunt aut dicuntur, & quæ in ea recta, vel quæ non recta, quodq; eius principiũ, vel finis, vel medium, aut aliud quid ex his, quòd in ea rectè ſe habere, vel nõ habere demonſtretur, & quæ parua, quæ magna, quæq; copioſa & pauca. Quodq; totum in ea vnum eſt, & omnia quicquid vnum. Et quæ effici poſſe conſtat cùm intelligere, tum dicere, & ſi opus eſt, neq; noſſe, neq; dicere, neq; facere. Et quicquid in ea promptitudinem habet, aut non habet, & quicquid opportunum, & inopportunũ. Quibuſq; alijs artibus ſimilis ſit & quibus nihil ſimilis. Corporiſq; quodnam calidum, aut frigidum, aut ſiccum, aut humidum, & quodnam robuſtum aut debile, aut denſum, aut rarum. Et quæ ex multis pauca fiũt, aut in peius, aut melius vertunt. Quodq; honeſtè vel turpiter, vel tardè, vel citò, vel rectè, vel non rectè, & quodnam malum malo ſuccedere neceſſe eſt. Quæ animo ſecum reputantem in oratione obſeruare oportet, & in quo quis aut dicendo, aut veſtigando, aut reſpondendo, ab his aberret, an quæ multa ſunt, pauca, & quæ fieri non poſſunt, ea fieri poſſe aſſerat, & quicquid aliud dicendo peccarit, hoc modo obſeruando, contraria oratione inſectari. Morbi igitur omnes oriuntur partim quidem ex his quæ in corpore inſunt, pituita & bile, partim verò ex his quæ extra obueniunt, laboribus & vulneribus, quin & à calido ſupra modum calefaciente, & frigido ſupra modum refrigerante, & ſicco plus æquo reſiccante, & humido etiam plus æquo humectante

ΟΣ ἂν περὶ ἰητρικῆς ἐθέλῃ ἐρωτᾷν τε ὀρθῶς, καὶ ἐρωτῶντι ἀποκρίνεσθαι καὶ ἀντιλέγειν ὀρθῶς, ἐνθυμεῖσθαι χρὴ τάδε· πρῶτον μὲν, ἀφ' ὧν αἱ νοῦσοι γίνονται πᾶσαι τοῖσιν ἀνθρώποισιν· ἔπειτα δὲ, ὁκόσα ἀναγκαίως ἔχει τὸ νόσημα, ὡς ὅταν γένηται, εἶναι ἢ μακρὰ, ἢ βραχέα, ἢ θανάσιμα, ἢ μὴ θανάσιμα, ἢ ἔμπηρόν τι τοῦ σώματος γενέσθαι, ἢ μὴ ἔμπηρον· καὶ ὁκόσα ἐπὴν γένηται, ἐνδοιαστὰ ἢ κακὰ ἀπ' αὐτέων ἀποβαίνει, ἢ ἀγαθά· καὶ ἀφ' ὁκοίων νοσημάτων, ἐφ' ὁκοῖα μεταπίπτει· καὶ ὁκόσα ἐπιτυχίῃ ποιέουσιν οἱ ἰητροὶ θεραπεύοντες τοὺς ἀσθενέοντας· καὶ ὁκόσα ἀγαθὰ ἢ κακὰ οἱ νοσέοντες ἐν τῇσι νούσοισι πάσχουσι· καὶ ὁκόσα ἀκαιρίῃ ἢ λέγεται ἢ ποιέεται ὑπὸ τοῦ ἰητροῦ πρὸς τὸν νοσέοντα, ἢ ὑπὸ τοῦ νοσέοντος πρὸς τὸν ἰητρὸν· καὶ ὁκόσα ἀκριβῶς ποιέεται ἐν τῇ τέχνῃ καὶ λέγεται, καὶ ἅ τε ὀρθὰ ἐν αὐτῇ, καὶ ἅ τε μὴ ὀρθά· καὶ ὅ, τι αὐτῆς ἀρχὴ, ἢ τελευτὴ, ἢ μέσον, ἢ ἄλλο τι ἀποδεδειγμένον τῶν τοιούτων, ὅ, τι καὶ ὀρθῶς ἐστιν ἐν αὐτῇ εἴρηται, ἢ μὴ εἴρηται· καὶ τὰ σμικρὰ καὶ τὰ μεγάλα, καὶ τὰ πολλὰ καὶ τὰ ὀλίγα. καὶ ὅ, τι ἅπαν ἐστὶν ἐν αὐτῇ ἓν καὶ πάντα, καὶ ὅ, τι ἓν καὶ τὰ ἀνυστὰ νοῆσαί τε καὶ εἰπεῖν καὶ εἰδέναι, μήτε νοῆσαι, μήτε εἰπεῖν, μήτε ποιῆσαι· καὶ ὅ, τι εὐχερείη ἐν αὐτῇ· καὶ ὅ, τι ἀγχιείη καὶ ἐν τι καιρὸς, καὶ ὅ, τι ἀκαιρίη· καὶ τῶν τεχνέων τῶν ἄλλων ᾗσι τε ἔοικε, καὶ οἷσιν οὐδὲν ἔοικε. καὶ τοῦ σώματος, ὅ, τι θερμὸν ἢ ψυχρὸν, ἢ ξηρὸν, ἢ ὑγρὸν· καὶ ὅ, τι ἰσχυρὸν ἢ ἀσθενὲς, ἢ πυκνὸν, ἢ ἀραιόν· καὶ ὁκόσα τῶν πολλῶν ὀλίγα γίνεται, ἢ ἐπὶ τὸ κάκιον, ἢ ἐπὶ τὸ ἄμεινον· καὶ ὅ, τι καλῶς ἢ αἰσχρῶς, ἢ βραδέως ἢ ταχέως, ἢ ὀρθῶς ἢ μὴ ὀρθῶς· καὶ ὅ, τι κακὸν ἐπὶ κακῷ ἀνάγκη γίνεσθαι, ταῦτα ἐνθυμηθέντα διαφυλάσσειν δεῖ ἐν τοῖσι λόγοισιν, ὅ, τι ἂν δή τις τούτων ἁμαρτάνῃ ἢ λέγων, ἢ ἐρωτῶν, ἢ ἀποκρινόμενος. καὶ ἢν πολλὰ ἐόντα σμικρὰ καὶ ἢν ἀδύνατα εἴπῃ, δυνατὰ φῇ εἶναι ἢ ὅ, τι ἂν ἄλλο ἁμαρτάνῃ λέγων, ταῦτα φυλάσσοντα χρὴ ἐπιτίθεσθαι ἐν τῇ ἀντιλογίᾳ. αἱ μὲν οὖν νοῦσοι γίνονται ἅπασαι, τῶν μὲν ἐν τῷ σώματι ἐνεόντων, ἀπό τε χολῆς καὶ φλέγματος· τῶν δὲ ἔξωθεν, ἀπὸ πόνων καὶ τρωμάτων· ἀλλὰ καὶ τοῦ θερμοῦ καὶ ὑπερθερμαίνοντος, καὶ τοῦ ψυχροῦ καὶ ὑπερψύχοντος· καὶ τοῦ ξηροῦ, καὶ ὑπερξηραίνοντος καὶ τοῦ ὑγροῦ καὶ ὑπερυγραίνοντος.

καὶ

PLATE 1



Pag

ΑΡΕΤΑΙΟΥ ΚΑΠΠΑΔΟΚΟΥ

ΠΕΡΙ ΑΙΤΙΩΝ ΚΑΙ ΣΗΜΕΙΩΝ

ΟΞΕΩΝ ΠΑΘΩΝ

ΒΙΒΛΙΟΝ Α

Ἡ ἀρχὴ λείπει.

ΚΕΦΑΛΗ Ε

περὶ παροξυσμοῦ ἐπιληπτικῶν

ARETAEI CAPPADOCIS

DE CAUSIS ET SIGNIS

ACUTORUM MORBORUM

LIBER PRIMUS.

Principium deficit.

CAPUT QUINTUM

¹De Comitialis morbi acceſſione

A * ἀμβλυώπηες, ἴλιγγοι, τενόντων [a] βάρεα, [b] φλεβῶν ἐν τῷ τραχήλῳ πληρώσιες καὶ διατάσιες, ναυτίαι τὰ πολλὰ μὲν ἐπὶ σιτίοις, οὐχ ἥκιστα δὲ καὶ ἐπ' ἀσιτίῃσι, καὶ [d] βληχρὴ, καὶ [e] φλέγμα ἐμέεται συχνὸν· ἀποσιτίη καὶ ἀπεψίη ἐπὶ σμικροῖσι ἐδέσμασι· φυσώδεες, ἐπηρμένοι ὑποχόνδρια. τάδε μὲν οὖν διηνεκέα. ἢν δὲ πλησίον [f] εἴδεος ἢ τοῦ παροξυσμοῦ, κύκλῳ μαρμαρυγαὶ πρὸ τῆς [g] ὄψιος πορφυρέων ἢ μελάνων, ἢ πάντων ὁμοῦ συμμεμιγμένων, ὡς δοκέειν [h] τὴν ἐν οὐρανῷ πετανύσθαι ἶριν· ἦχοι ὤτων, βαρυοδμίη, ὀργίλοι, πικρόχολοι παραλόγως· κατέπεσον γοῦν τινὲς ὑπὸ προφάσιος ἐξ ἀθυμίης· B μετεξέτεροι δὲ ῥεύματι ποταμοῦ ἀτενέες ἐνιδόντες, ἢ τροχῷ δινευμένῳ, ἢ [i] βέμβικι ἑλισσομένῃ· ἄλλοτι δὲ ὄσφρησις βαρέων ὀσμῶν [k] κατέβαλε, ὥσπερ [l] γαγάτου λίθου. τοῖσδε μὲν οὖν ἐν τῇ κεφαλῇ τὸ

κακὸν

[a] Βαρέα Henisch [illegible] φλεβῶν τῶν ἐν τῷ Petit rep in MS [c] Αἰ Henisch [d] Βληχρὸν Gorpyl rep in MS [e] Βλέγμα Henisch [f] ἴδιος f δίος ἄλλοι δ' ἴδιος Henisch rep in MS [illegible] Gorpyl rep in MS [illegible] si prope ſit metus acceſſionis; h e ſi acceſſio inſtat, imminet Petit rep in MS [g] Ὄψιος Henisch [h] Ἐν τῷ οὐρανῷ Henisch [i] Βέμβικι Henisch rep in MS

A * hebetudines, vertigines, tendonum gravitates, venarum colli repletiones & diſtenſiones nauſea frequentius quidem a cibis, non minimè tamen & ab inedia, puſilla quædam nauſea ſequitur, & uberior pituitæ fit vomitus paucis aſſumptis cibis faſtidiunt, & crudi ſunt, flatibus replentur, præcordia elata habent. hæc ſanè perpetuo comitantur quum vero acceſſio appropinquat, [2] ſplendores quidam purpurei, aut nigri, aut omnes unà permixti ob oculos in orbem verſantur, ac diſcurrunt, ut in cœlo iris prætenta eſſe videatur aures ſonant, fœdum odorem ſentiunt, iracundi fiunt, bilis præter rationem accenditur B [3] quibuſdam igitur concidendi cauſa, ægror animi fuit aliqui intentè fluminis decurſum, aut rotam quæ circumvolvitur, aut turbinem, qui in orbem agitur, conſpicati alios autem rerum graveolentia, ut gagatis [4] lapis odoratus, proſtravit his

A utique

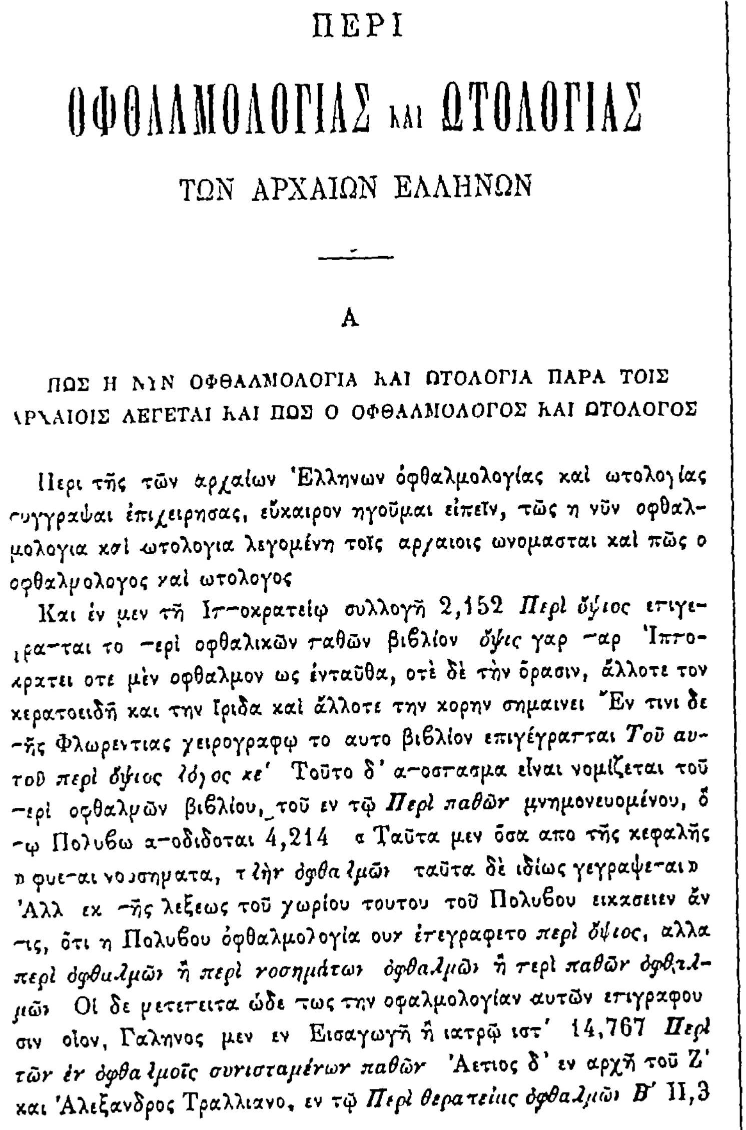
[k] Κατέβαλε Henisch rep in MS [l] τοῦ γαγάτου Henisch.

---

[1] De Acceſſione Comitialium juxta Plinium Petit emend. [2] Circuli ignei, ut Cælius Aurel habet L. b 1 tard paſſ. Cap 4, Petit [3] Quidam igitur levi de cauſa, utpote ob animi angorem, ceciderunt Henisch [4] Lapidis Henisch

Tom I.

PLATE 2



ΠΕΡΙ

ΟΦΘΑΛΜΟΛΟΓΙΑΣ ΚΑΙ ΩΤΟΛΟΓΙΑΣ

ΤΩΝ ΑΡΧΑΙΩΝ ΕΛΛΗΝΩΝ

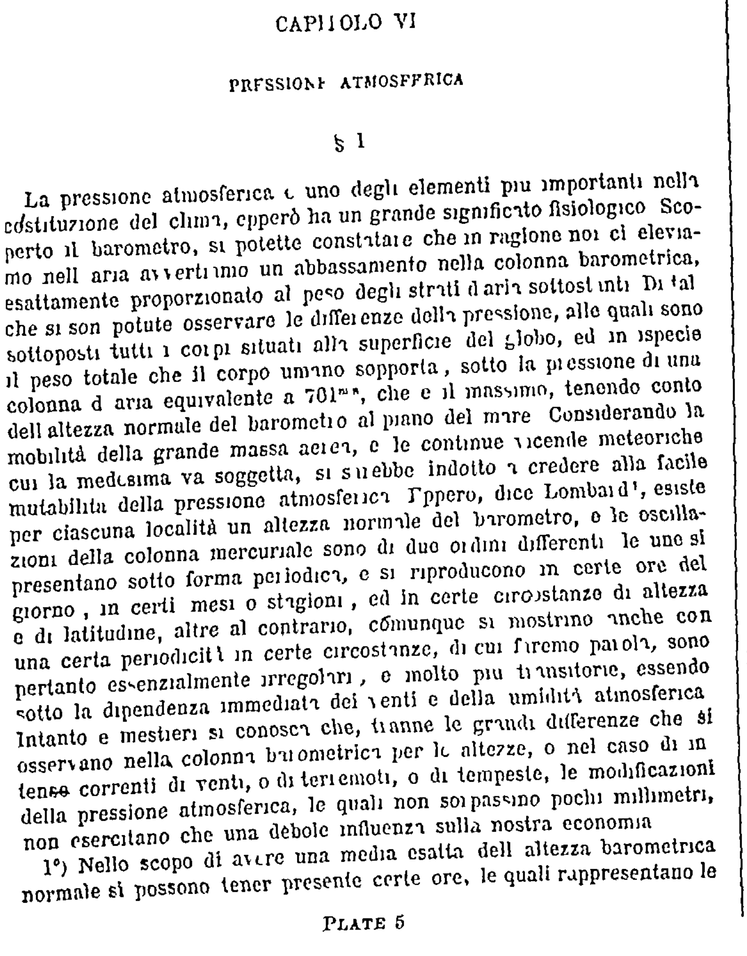
Α

ΠΩΣ Η ΝΥΝ ΟΦΘΑΛΜΟΛΟΓΙΑ ΚΑΙ ΩΤΟΛΟΓΙΑ ΠΑΡΑ ΤΟΙΣ ΑΡΧΑΙΟΙΣ ΛΕΓΕΤΑΙ ΚΑΙ ΠΩΣ Ο ΟΦΘΑΛΜΟΛΟΓΟΣ ΚΑΙ ΩΤΟΛΟΓΟΣ

Περι τῆς τῶν αρχαίων Ἑλληνων ὀφθαλμολογίας καὶ ωτολογίας συγγραψαι ἐπιχειρησας, εὔκαιρον ηγοῦμαι εἰπεῖν, πῶς η νῦν οφθαλμολογια καὶ ωτολογια λεγομένη τοῖς αρχαιοις ωνομασται καὶ πῶς ο οφθαλμολογος καὶ ωτολογος

Και ἐν μεν τῇ Ιπποκρατείῳ συλλογῇ 2,152 *Περὶ ὄψιος* επιγεγραπται το περὶ οφθαλμικῶν παθῶν βιβλίον ὄψις γαρ παρ Ἱπποκρατει οτε μὲν οφθαλμον ως ἐνταῦθα, οτὲ δὲ τὴν ὅρασιν, ἄλλοτε τον κερατοειδῆ και την ἴριδα καὶ ἄλλοτε την κορην σημαινει Ἔν τινι δε τῆς Φλωρεντιας χειρογραφῳ το αυτο βιβλίον επιγέγραπται *Τοῦ αυτοῦ περὶ ὄψιος λόγος κε'* Τοῦτο δ' αποσπασμα εἶναι νομίζεται τοῦ περὶ οφθαλμῶν βιβλίου, τοῦ εν τῷ *Περὶ παθῶν* μνημονευομένου, ὅ τῳ Πολυβῳ αποδιδοται 4,214 « Ταῦτα μεν ὅσα απο τῆς κεφαλῆς » φυεται νοσηματα, πλὴν *ὀφθαλμῶν* ταῦτα δὲ ιδίως γεγραψεται » Ἀλλ εκ τῆς λεξεως τοῦ χωρίου τουτου τοῦ Πολυβου εικασειεν ἄν τις, ὅτι η Πολυβου ὀφθαλμολογία ουκ ἐπεγραφετο *περὶ ὄψιος*, αλλα *περὶ ὀφθαλμῶν* ἢ *περὶ νοσημάτων ὀφθαλμῶν* ἢ περὶ *παθῶν ὀφθαλμῶν* Οἱ δε μετεπειτα ὧδε πως την οφθαλμολογίαν αυτῶν επιγραφουσιν οἷον, Γαληνος μεν εν Εισαγωγῇ ἢ ιατρῷ ιστ' 14,767 *Περὶ τῶν ἐν ὀφθαλμοῖς συνισταμένων παθῶν* Ἀετιος δ' εν αρχῇ τοῦ Ζ' και Ἀλεξανδρος Τραλλιανο, εν τῷ *Περὶ θεραπείας ὀφθαλμῶν Β'* II,3

Plate 3



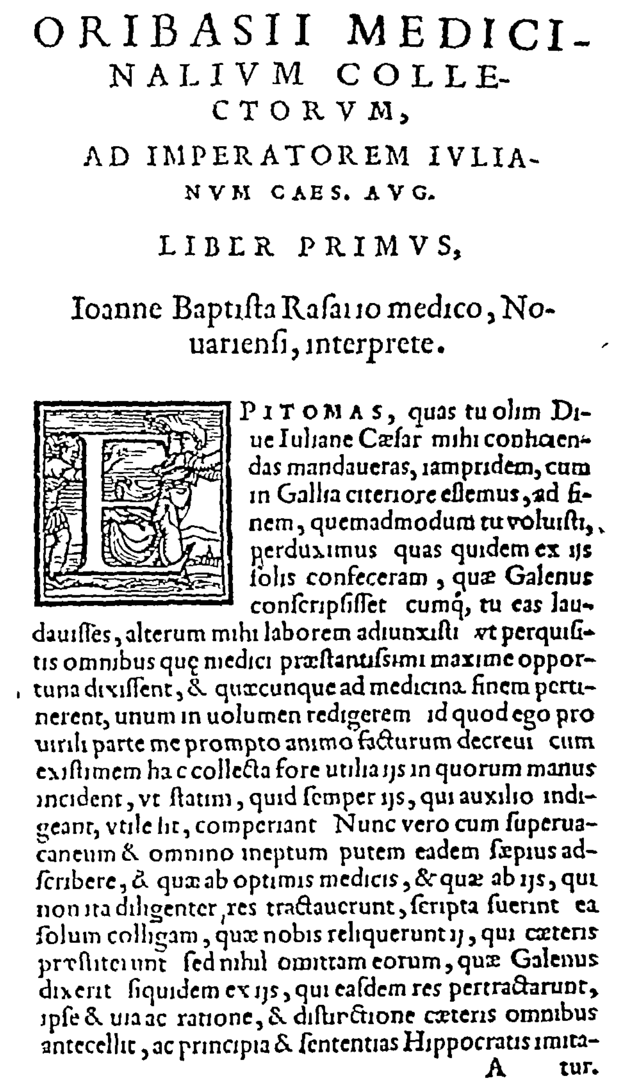
CAPITOLO VI

PRESSIONE ATMOSFERICA

§ 1

La pressione atmosferica è uno degli elementi più importanti nella
costituzione del clima, epperò ha un grande significato fisiologico Sco-
perto il barometro, si potette constatare che in ragione noi ci eleva-
mo nell aria avvertiamo un abbassamento nella colonna barometrica,
esattamente proporzionato al peso degli strati d aria sottostanti Di tal
che si son potute osservare le differenze della pressione, alle quali sono
sottoposti tutti i corpi situati alla superficie del globo, ed in ispecie
il peso totale che il corpo umano sopporta, sotto la pressione di una
colonna d aria equivalente a 701^{mm}, che è il massimo, tenendo conto
dell altezza normale del barometro al piano del mare Considerando la
mobilità della grande massa aerea, e le continue vicende meteoriche
cui la medesima va soggetta, si sarebbe indotto a credere alla facile
mutabilità della pressione atmosferica Eppero, dice Lombard¹, esiste
per ciascuna località un altezza normale del barometro, e le oscilla-
zioni della colonna mercuriale sono di due ordini differenti le une si
presentano sotto forma periodica, e si riproducono in certe ore del
giorno, in certi mesi o stagioni, ed in certe circostanze di altezza
e di latitudine, altre al contrario, comunque si mostrino anche con
una certa periodicità in certe circostanze, di cui faremo parola, sono
pertanto essenzialmente irregolari, e molto più transitorie, essendo
sotto la dipendenza immediata dei venti e della umidità atmosferica
Intanto è mestieri si conosca che, tranne le grandi differenze che si
osservano nella colonna barometrica per le altezze, o nel caso di in-
tense correnti di venti, o di terremoti, o di tempeste, le modificazioni
della pressione atmosferica, le quali non sorpassino pochi millimetri,
non esercitano che una debole influenza sulla nostra economia
1°) Nello scopo di avere una media esatta dell altezza barometrica
normale si possono tener presente certe ore, le quali rappresentano le

Plate 5



ORIBASII MEDICINALIVM COLLECTORVM,

AD IMPERATOREM IVLIANVM CAES. AVG.

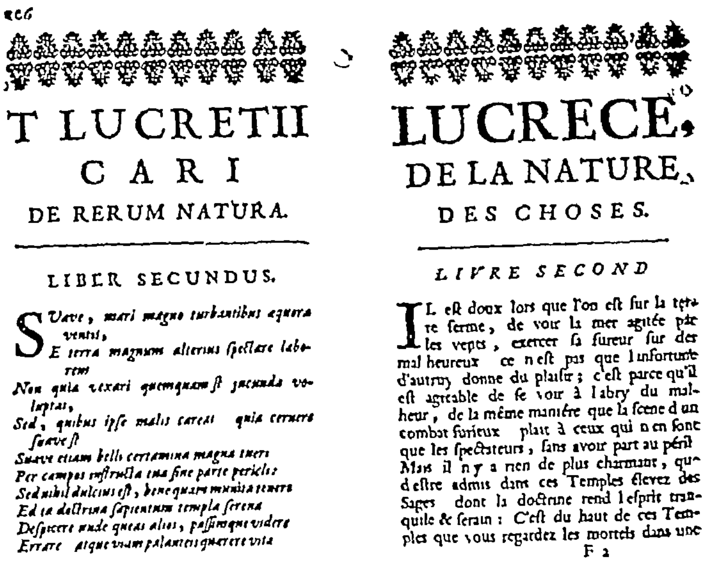
LIBER PRIMVS,

Ioanne Baptiſta Raſario medico, Nouarienſi, interprete.

EPITOMAS, quas tu olim Diue Iuliane Cæſar mihi contrahendas mandaueras, iampridem, cum in Gallia citeriore eſſemus, ad finem, quemadmodum tu voluiſti, perduximus quas quidem ex iis ſolis confeceram, quæ Galenus conſcripſiſſet cumq; tu eas laudauiſſes, alterum mihi laborem adiunxiſti vt perquiſitis omnibus quę medici præſtantiſsimi maxime opportuna dixiſſent, & quæcunque ad medicinæ finem pertinerent, unum in uolumen redigerem id quod ego pro uirili parte me prompto animo facturum decreui cum exiſtimem hæc collecta fore utilia iis in quorum manus incident, vt ſtatim, quid ſemper iis, qui auxilio indigeant, vtile ſit, comperiant Nunc vero cum ſuperuacaneum & omnino ineptum putem eadem ſæpius adſcribere, & quæ ab optimis medicis, & quæ ab iis, qui non ita diligenter res tractauerunt, ſcripta fuerint ea ſolum colligam, quæ nobis reliquerunt ii, qui cæteris præſtiterunt ſed nihil omittam eorum, quæ Galenus dixerit ſiquidem ex iis, qui eaſdem res pertractarunt, ipſe & uia ac ratione, & diſtinctione cæteris omnibus antecellit, ac principia & ſententias Hippocratis imitatur.

A

Plate 4



T LUCRETII CARI DE RERUM NATURA.

LIBER SECUNDUS.

Suave, mari magno turbantibus æquora ventis,
E terra magnum alterius ſpectare laborem
Non quia vexari quemquam'ſt jucunda voluptas,
Sed, quibus ipſe malis careas quia cernere ſuave'ſt
Suave etiam belli certamina magna tueri
Per campos inſtructa tua ſine parte pericli
Sed nihil dulcius eſt, bene quam munita tenere
Edita doctrina ſapientum templa ſerena
Deſpicere unde queas alios, paſſimque videre
Errare atque viam palanteis quærere vitæ

LUCRECE, DE LA NATURE, DES CHOSES.

LIVRE SECOND

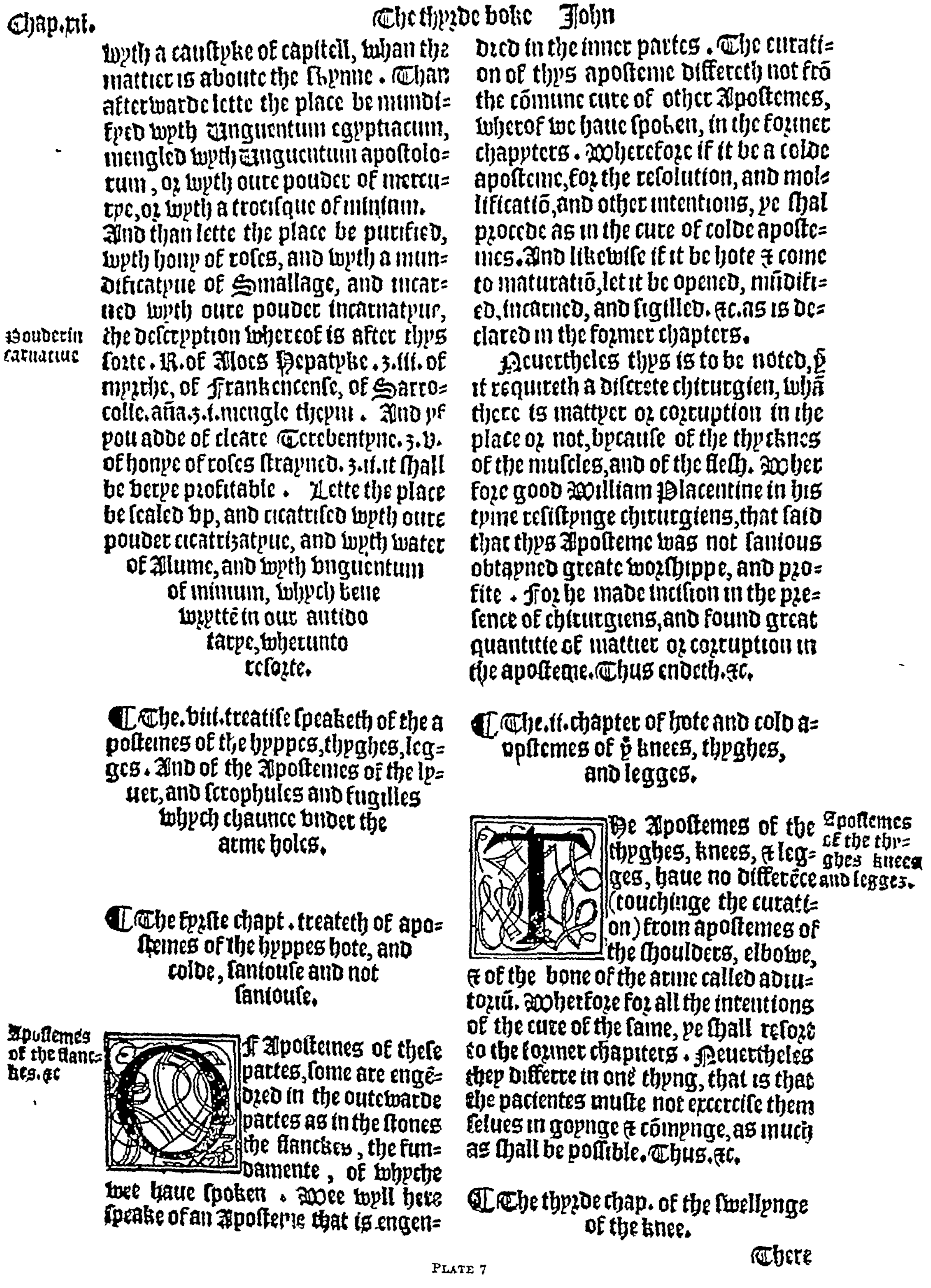
IL eſt doux lors que l'on eſt ſur la terre ferme, de voir la mer agitée par les vents, exercer ſa fureur ſur des malheureux ce n'eſt pas que l'infortune d'autruy donne du plaiſir ; c'eſt parce qu'il eſt agreable de ſe voir à l'abry du malheur, de la même maniére que la ſcene d'un combat furieux plait à ceux qui n'en ſont que les ſpectateurs, ſans avoir part au péril Mais il n'y a rien de plus charmant, que d'eſtre admis dans ces Temples élevez des Sages dont la doctrine rend l'eſprit tranquile & ſerain : C'eſt du haut de ces Temples que vous regardez les mortels dans une

F 2

Plate 6

there have been many changes, that it is still changing, is positive proof that it is alive and takes note of the changes and mutations brought about by science and the flight of time

Dr Rose, whose enthusiasm for the Greek language seems stimulated by the romantic history of that interesting people, seems to think that we should adopt modern Greek because of that history The reason is not a valid one, the only real question before the scientific world is What language can we adopt as that one which will require the least expenditure of time and energy consistent with accurate transmission of ideas? The question of history has nothing to do with it. We are to consider the actual need and the best means of supplying it. Shall we return to Latin? Here there is no change and for nearly one thousand seven hundred years that was the scientific language of the world. Less than two centuries have elapsed since Latin ceased to be the common language of science. It was abandoned simply because it was inelastic, it failed to accommodate itself to the new inventions and discoveries which created a new world to be named, and myriads of objects quite unknown to the classic Roman. The



Chap.xi. The thyrde boke John

wyth a cauſtyke of capitell, whan the matter is aboute the ſkynne. Than afterwarde lette the place be mundifyed wyth Unguentum egyptiacum, mengled wyth Unguentum apoſtolorum, or wyth oure pouder of mercurye, or wyth a trociſque of minium. And than lette the place be purified, wyth hony of roſes, and wyth a mundificatyue of Smallage, and incarned wyth oure pouder incarnatyue, the deſcryption whereof is after thys ſorte. R. of Aloes Hepatyke. ℥.iii. of myrrhe, of Frankenceuſe, of Sarrocolle. ana. ℥.i. mengle theym. And yf you adde of cleare Terebentyne. ℥.v. of honye of roſes ſtrayned. ℥.ii. it ſhall be verye profitable. Lette the place be ſealed vp, and cicatriſed wyth oure pouder cicatrizatyue, and wyth water of Alume, and wyth vnguentum of minium, whych bene wrytte in our antidotarye, whereunto reſorte.

Pouder incarnatiue

¶ The. viii. treatiſe ſpeaketh of the apoſtemes of the hyppes, thyghes, legges. And of the Apoſtemes of the lyuer, and ſcrophules and fugilles whych chaunce vnder the arme holes.

¶ The fyrſte chapt. treateth of apoſtemes of the hyppes hote, and colde, ſaniouſe and not ſaniouſe.

Apoſtemes of the flanckes. &c

Of Apoſtemes of theſe partes, ſome are engendred in the outewarde partes as in the ſtones the flanckes, the fundamente, of whyche wee haue ſpoken. Wee wyll here ſpeake of an Apoſteme that is engendred in the inner partes. The curation of thys apoſteme differeth not frõ the cõmune cure of other Apoſtemes, whereof we haue ſpoken, in the former chappters. Wherefore if it be a colde apoſteme, for the reſolution, and mollificatiõ, and other intentions, ye ſhal procede as in the cure of colde apoſtemes. And likewiſe if it be hote & come to maturatiõ, let it be opened, mũdified, incarned, and ſigilled. &c. as is declared in the former chapters.

Neuertheles thys is to be noted, yͭ it requireth a diſcrete chirurgien, whã there is mattyer or corruption in the place or not, bycauſe of the thyckenes of the muſcles, and of the fleſh. Wherfore good William Placentine in his tyme reſiſtynge chirurgiens, that ſaid that thys Apoſteme was not ſanious obtayned greate worſhippe, and profite. For he made inciſion in the preſence of chirurgiens, and found great quantitie of mattier or corruption in the apoſteme. Thus endeth. &c.

¶ The. ii. chapter of hote and cold apoſtemes of yͤ knees, thyghes, and legges.

The Apoſtemes of the thyghes, knees, & legges, haue no differẽce (touchinge the curation) from apoſtemes of the ſhoulders, elbowe, & of the bone of the arme called adiutoriũ. Wherfore for all the intentions of the cure of the ſame, ye ſhall reſorte to the former chapiters. Neuertheles they differre in onẽ thyng, that is that the pacientes muſte not excercise them ſelues in goynge & cõmynge, as much as ſhall be poſſible. Thus. &c.

Apoſtemes of the thyghes knees and legges.

¶ The thyrde chap. of the ſwellynge of the knee.

There

PLATE 7

modern Italian, while still spoken best in the soft Tuscan sound, and is based upon ancestral Latin, differs as widely as Spanish or French from the original tongue I present you a page from Oribasius, which is from the famous press of Aldus, of Venice, printed in 1560, showing the Latin page of the sixteenth century, plate 4, and a section from Fazio's hygiene, printed in Italian, at Naples in 1887, plate 5 The wide departure from the Latin could scarcely be made more plain, and it is quite clear that even the Italian would scarcely find the Latin language easier to him than to the Spaniard, the Portuguese or the French

Indeed, we may easily see that there is a close correspondence between the French of the seventeenth century and the Latin where, as in this page of Lucretius, printed in Paris in 1692, we have side by side the Latin and the French, plate 6 Nor is the divergence of modern French very great from the Latin We may exclude English from consideration on account of its extreme difficulty It is not strange that it should be difficult when we reflect from what varied roots the English language is derived The Teutonic, Gothic, Celtic and French contribute to its common stock, while its scientific language is mainly of Greek and Latin parentage, and this conglomerate, more rich in words than any other, except perhaps the monosyllabic tongues of the Orient, are more varied and flexible than any other But the scientific foreigner can only acquire our language with extreme difficulty, and he rarely if ever learns to speak it without a betraying accent All arguments considered, I have come to the conclusion that the French language is that most easily acquired by other nations, and the one that can be used for the purposes of an international scientific language with least friction

As already mentioned, it is now the language of diplomacy and polite society throughout the world Nearly every medical man who learns a language in addition to his own, learns French This is absolutely true of all Latin nations At the International Medical Congress of Berlin, I never met a physician from Mexico or Central or South America who was unable to speak French, and I attended a dinner at Prof Martin's, where nearly every country was represented, and the language spoken was French, notwithstanding our host was German and we were in the great German capital In Roumania and Turkey the medical publications are largely in French, and in Buenos Ayres and Brazil medical pamphlets are usually published in French even if published in the native Spanish or Portuguese, and in many cases such documents are duplicated

It seems to me that laying aside all questions of sentiment, either of romance or patriotism, and keeping steadily to the utilitarian question confronting us, we must admit that we may meet more people on a common level by the use of the French language in all international gatherings, than by the use of any other known tongue The transition from Latin to French is so easy that almost anybody who has conquered the rudiments of Latin, may acquire a translating knowledge of French in a very short time

I quite agree with Dr Rose in the statement that in learning a language we must learn it by ear as well as by the eye, and instances are numerous where one with good translating knowledge of a language, has no knowledge whatever of its sound For this reason, if there were no other, the study should be carried on conversationally as well as by reading the written or printed word This applies with as much force to French as to any existing language

The changes in the French language in the last three hundred years are much fewer than in the English language of the same period If you examine one of the English black letter scientific books, such for instance as this section from an English translation of John de Vigo, printed in 1550, plate 7, you will doubtless have to look twice to realize that it is English, as it was written, but the French of the same period, while naturally changing somewhat, remains so nearly the same that it may be read without difficulty

I conclude, gentlemen of the ASSOCIATION, not with a certainty that the question is settled, but with the firm conviction that you are increasing the scholar class in our profession and that you will be able to unite on some language which we may all choose as our second language, to be used at our international gatherings to the glory and advancement of medicine throughout the world

LECTURES

OPENING LECTURE OF THE COURSE ON MILITARY HYGIENE

BY MAJOR CHARLES SMART

SURGEON U S A, ARMY MEDICAL SCHOOL WASHINGTON, D C

Hygeia was the Godess of Health, the daughter of Æsculapius Hygiene is the science of Health It was called by Prof Parkes the art of preserving health, but since he wrote the introduction to his classical work hygiene has been developed by study and observation into a science, and its art or the practical application of its laws has recieved the name of sanitation We are here to study the science and its practical applications, not only that we may protect the soldiers of the United States from the attacks of disease, but that we may preserve their physical powers at their maximum of vigor

The duties of an army surgeon are various They require him to be a many-sided specialist When a soldier becomes sick the army medical officer has to treat him as his attending physician, when accidents or injuries occur he has to be prepared for the emergency as operative surgeon, but at all times he has to watch over the health and strength of the command as its sanitary or health officer In this last respect his duties do not differ materially from those of the health commissioner of a municipality The health officer of a city has to guard the community against the introduction of infectious diseases by a system of quarantine or of careful inspection If any infectious disease, such as smallpox, scarlet fever measles, diphtheria, cholera, or yellow fever, should make its appearance in the city, nothwithstanding his precautions, he must endeavor to prevent its spread by isolation, disinfection and other special means, meanwhile determining, if possible, its derivation and the measures to be adopted to prevent the occurrence of other cases from the same source He has likewise to guard the city against any outbreak of disease from local insanitary conditions, or in other words, to see that all nuisances are abated He has to look after the wholesomeness of meat, milk and vegetables, and the condition as to purity or adulteration of various articles of food He has to keep guard over the water supply, whether general from the city reservoir or local from wells or springs, and to provide for the satisfactory removal of offal, garbage, waste water and night soil Lastly he is responsible for the accuracy of the vital statistics of the community To enable him to perform these various duties he has the assistance of a staff of expert employes, including sanitary, police and plumbing inspectors, bacteriologists, analysts and statisticians

The army medical officer has similar responsibilities, but he has no such staff, he must be prepared to undertake by himself any or all of these duties as the occasion may require Hence the necessity on his part for a more intimate knowledge of the methods of practical hygiene than is usually conveyed in the curriculum of a medical college

It is only in recent years that the status of the army medical officer as a health officer has been officially recognized It is true that in the early years of the republic he was charged by the Regulations to do everything in his power to eradicate contagion, but this meant only contagion in the hospitals, the contagion of hospital gangrene and of the deadly typhus fever, and gave him no power over the general well being of the troops The Regulations of 1828 provided that when troops were in quarters the surgeon should from time to time inspect the rooms and kitchens, the quality and preparation of the food, and the location and condition of the vaults, reporting defects and suggesting improvements to the commanding officer, who was thereupon directed to take such action as seemed to him necessary and proper The surgeons did this honestly and faithfully, inspecting and recommending until they became tired of making recommendations that were never carried into effect, for the commanding officers of those days seldom considered it needful or proper to take any action, but instead often regarded the medical officer as officious and meddlesome, and his report and recommendations as reflections on their administration For many years the Regulation was, therefore, a dead letter, but in progress of time the popularization of sanitary science became such that military commanders began to have a better appreciation of sanitary recommendations, and as a result we have now vastly improved conditions and lessened rates of sickness and mortality At the present time most military officers are as interested in the sanitary condition of their men as are the medical officers themselves

I have told you that the duties of the military health officer do not differ materially from those of the civilian officer, they are both based on the same principles It may be well, therefore, to outline briefly some of the salient features in the history of hygiene that you may the better appreciate the value of sanitation in improving the condition of the human race Ordinarily medical men in dealing with medical history drop back to Hippocrates, the Father of Medicine, who lived in the fifth century before Christ, but hygiene was known and hygienic rules followed long before his time Among the Greeks the very name *hygeia* suggests its existence as far back as the mythical time of Homer's Iliad, while about the same time in the wilderness of southern Syria the leader of the Israelites elaborated a system of sanitary rules for the protection of the nation which he had formed out of the Egyptian bondsmen In doing this, however, it is probable that he gathered up into one system of sanitary law all the knowledge of the subject then possessed by the priests and learned men of the Egyptians He insisted on cleanliness, the isolation of the sick and care in the selection of articles of diet, and in carrying into effect these rules, which was scrupulously done by the Jews in after ages, they oftentimes protected themselves from epidemics of disease which scourged their Christian neighbors

It is, however, to Hippocrates that the credit is usually given of having been the first teacher of hygiene He had established a sanitarium and college of medicine at the springs on the Island of Kos in the Aegean Sea, and his name and reputation were known throughout the whole of the civilized world, that is throughout the Grecian peninsula and in the settlements on the shores of the Mediterranean It is related that Pericles sent for him to come and save the city when the plague was devastating Athens and threatening the extinction of the people He went, and found magnificent dwellings and luxurious interiors, but the city as a whole saturated with filth He began his work of sanitation by draining and cleaning up, and endeavored to protect against seizure by keeping large bonfires, to which aromatics had been added, burning in the streets, thus recognizing, not an infection which he was destroying, but an unusual and harmful constitution of the atmosphere which he was endeavoring to alter This epidemic constitution of the atmosphere, in explanation of the existence of epidemic disease, has survived almost to the present day, lingering longest in connection with influenza, but the progress of bacteriology may be said to have now laid it to rest On his return to Kos he wrote his book on "Air, Water and Places," which is regarded as the first work written on the subject of hygiene

Rome received her instruction in medicine from Greek physicans, but she appears to have elaborated her own system of sanitation, for the great sewer of the Tarquins, which to-day helps to carry off the waste water of the city, was built 140 years before Hippocrates was born It opens into the Tiber by an arch twelve feet high, surrounded by three tiers of voussoirs Three hundred years later the Appian Way was commenced, and the first water from a distance was brought into the city by the Censor Appius Claudius Cæcus In another 300 years, or in the time of Augustus, the aqueducts bringing water from the Sabine hills were 270 miles long, 30 miles crossing the Campagna on lofty arches The Campagna at that time was covered with villas and country seats, malaria was unknown, for drainage and cultivation kept it in good sanitary condition Every care was taken of the health of the people and of the sanitation of the imperial city Later, hygiene degenerated into luxury, which has left a record in the ruins of the public baths The colonnade surrounding the Thermæ of Caracallus was a mile long, and enclosed trees, flowers, lawns, and a stadium for the exercise recommended to be taken after the bath, but if one were lazy the halls, theatre, museum, library, etc, within the building afforded other means of enjoyment At the present day the remains of this structure are, after the Colosseum, the grandest ruins in Rome

In progress of time the civilization of the Roman Empire was swept away by the inroads of the northern barbarians Alaric of the Visigoths captured Rome early in the fifth century, and Genseric toward the middle of that century completed its destruction The dark ages descended upon Europe, and nearly a thousand years elapsed before the dawn of our modern civilization began to illumine the mental atmosphere of the Aryan race.

Two diseases which affected humanity from the earliest periods of recorded history had much influence in stimulating a practical interest in preventive medicine. To leprosy we owe our present hospital systems, and to the plague our system of quarantine and maritime sanitation.

Leprosy was common among the Israelites throughout their history. They brought the disease with them from Egypt, and from the Egyptians also Moses no doubt obtained his rules for diagnosis and for the segregation of the lepers without the camp, as given in Chapter xii of Leviticus. General Lew Wallace, in his novel, "Ben Hur," gives a realistic picture of the life of those affected with leprosy at the beginning of the Christian era. Leprosy was introduced into Greece and Rome in the first century by troops returning from Syria, and thence it spread slowly, almost imperceptibly, to the colonies in France, Spain and Britain. A thousand years later it was epidemic in Europe, and continued so for many hundred years; even royalty was not exempt from its infection. Every town of any size had its hospitals for the isolation of the lepers. There were 95 in England and no less than 2,000 in France, and the laws regulating them and their inmates were strictly enforced. These undoubtedly contributed much to the suppression of the disease. A few survivals of its existence continue in Europe, notably in Norway. Its prevalence continues in Asia and many other parts of the world, particularly in the West Indies; in the Hawaiian Islands 2 per cent of the natives are said to be affected.

The nature of the plagues of ancient history is uncertain. Besides that which we now recognize as plague, they probably included all fulminant febrile infections. We do not know the nature of the plague of Athens in the time of Pericles, nor of that which devastated Rome thirty years earlier and which, according to Livy, destroyed most of the slaves, one-half of the citizens, many senators, priests, tribunes, and two successive consuls. Bubonic plague was was described as a foreign disease by the earlier Roman writers. Europe did not become invaded until the reign of Justinian A. D. 542, when it entered Constantinople from Asia Minor. After this there were repeated reintroductions or epidemics developed from sporadic cases. A great wave started at Genoa in 1346, and continued with periodic exacerbations for twenty years, during which 25,000,000 people were destroyed. At this time contagion was noted as a factor in its spread, and Boccacio tells us of the efforts made to preserve Florence by excluding the disease. Sanitary cordons, the equivalent of what in our day we call "shot-gun quarantines," were drawn around healthy places to preserve them, and around infected places to prevent the spread of the pestilence. Venice at this time was the commercial metropolis of the world. Her vessels brought home the products of the East, and occasionally among them cases of the oriental plague. In 1423 she built a lazaretto for infected sailors, but not until 1484 were laws enacted for the detention of vessels from infected ports prior to permitting the admission of the crew, passengers or cargo. The city of London suffered, as did all the other European cities. Sporadic cases were noted every year, and occasionally the disease spread with epidemic violence. In 1665 the city had been comparatively exempt for seventeen years; but in the summer of this year 70,000 persons died out of a population of less than half a million, two-thirds of whom had fled into the country. The great fire occurred next year, and the subsequent freedom from plague was attributed by many to this purification by fire and the subsequent rebuilding of the city on better sanitary plans; but about the same time the disease began to subside all over Europe. Continental cities ascribed their protection to strict quarantine, but England did not institute quarantine until 1720, when a deadly epidemic in Marseilles threatened the whole of Europe. The progress of civilization, of which sanitation is a part, has banished plague, and it is now found only in the country south of the Caspian Sea and in certain of the seaports in China. It ravaged Canton and Hong Kong in 1894.

The discovery of the protective value of vaccination was the first grand step made by preventive medicine after the modern revival of learning. On May 14, 1796, Dr. Edward Jenner of Berkley, England, vaccinated a boy from the sore on a milkmaid's finger, and on July 1, following inoculated him with smallpox. The protective influence proved by this experiment took the mortal sting from a disease which for ages had more than decimated the human race. It has been estimated that prior to this discovery one-sixth of those born fell victims to smallpox, and of those who survived many were deaf, blind and disfigured. The smallpox pitted face, so common in the early days of this century, is now a rarity among civilized nations.

The study of typhus fever in prisons, ships, camps, and the crowded slums of large cities, demonstrated the existence of a contagion or pathogenic influence which appeared to be called into being under conditions of over-crowding and insufficiency of fresh air, and led to an appreciation of the value of air space and ventilation as sanitary factors in dwellings. The advantages derived from the practical application of this knowledge were the suppression of typhus fever and hospital gangrene, and the lessened prevalence of consumption and of those cachectic conditions that originate in ochlesis or crowd poisoning.

Its further study, leading to the distinction between typhoid and typhus fevers, had also important sanitary bearings, for it ultimately showed that the germ of the former disease was to be found in the excreta. For a time exhalations from these were regarded as containing the infective material. The sewers of a city containing typhoid fever patients were, in the language of Dr. William Budd, "a continuation of the diseased intestines." Sewer air had therefore, to be kept from our houses, and to this effort to protect us from typhoid exhalations, we are indebted for many improvements in sewerage systems and house plumbing. Later when the propagation of the disease by water was discovered, the attention of practical sanitarians became directed to the protection and purification of water supplies, an agitation which is still in progress.

I have said that the plague gave us our quarantines for protection against exotic diseases. It is, however, to cholera and yellow fever that we owe the improved quarantine methods of the present day. Cholera made its first progress over Europe in 1830; and in its periodic visitations since that time it has always come from India, and generally by way of the Red Sea The annual pilgrimage to Mecca brought cholera as well as pilgrims to the Holy City of the Mohammedans, and pilgrims from Europe carried the infection with them on their homeward journey International conferences were called at various times to consider the best system of protection The most important of these was that of Constantinople in 1866, which established a quarantine under international auspices in the Red Sea to intercept infected vessels and prevent Mecca from becoming a great distributing center This did much to restrain the advance of the disease and to relieve the local quarantines in the the Mediterranean Later conferences, as at Vienna in 1874 and at Rome in 1885, did much to lessen the cruelties of a prolonged quarantine by recognizing the English view—that importation of the germ was of less material consequence than local filth and insanitary conditions in the invaded seaport Local sanitation then became the order of the day, with medical inspection of incoming vessels to determine the presence or absence of disease, giving free pratique if no case had occurred on the ship and if seven days had elapsed since leaving the port of departure, but if the ship was infected provision was made for the removal of her sick, the retention under observation of those who apparently were well, and the disinfection of the vessel and her cargo

Yellow fever gave us a similar quarantine or sanitary service in the United States The belief that yellow fever was indigenous in this country rendered our quarantines valueless for many years Since the War of the Rebellion, however, the disease has been regarded as an exotic, and since the widespread epidemic of 1878–79 it has been excluded from the country by an inspection service to determine the condition of the vessel, the detention of infected persons, and the disinfection of infected ships

The registration of vital statistics and the institution of boards of health were two most important agencies in the modern progress of practical hygiene The record of births, marriages and deaths was made at first for legal purposes only It was not until 1839, when Dr William Farr prepared the first annual report of the Registrar General of England, that the value of vital statistics in directing the work of sanitation became demonstrated The mortality returns were the most important in this respect They showed the excessive number of deaths among children under five years of age, the high death rate in cities as compared with the rural districts, and in certain parts of a city as compared with certain other parts of it, the high death rate among persons engaged in certain trades, and the high rates occasioned at times by certain diseases All these facts led to observation and study for their explanation, and these again suggested hygienic measures to remedy the insanitary conditions that were discovered England has the most efficient system of registration The local registrars report weekly to the headquarters in London, and from the office of the Registrar General are issued weekly, monthly, quarterly and annual reports The Registrars General in Edinburgh and Dublin publish similar reports for Scotland and Ireland respectively In the United States many cities and a few of the States have excellent systems, but taken as a whole this country is far behind in the registration of vital statistics Not so, however, the U S Army, for the Army medical officer reports all cases of sickness as well as deaths, and this it is which gives so much value to the statistical reports of the Surgeon General An excess of sickness over the average of the Army at any one post can be detected immediately, and the character of the reported cases generally gives some indication of the nature of the necessary preventive measures

Boards of health, or local sanitary authorities, were a result of the inquiry into the causes of excessive death rates as developed by the registration returns Their duty was to lessen such rates by preventing or removing the insanitary conditions that gave rise to disease or promoted its spread In this country boards were first appointed in our large and growing cities Much good was accomplished by them within their jurisdiction, but it speedily became evident that for efficient work there must be such a cooperation among the local officials as could only be effected by the intervention of the State After a time State boards of health began to be organized by various legislatures, and it is to be observed that much of this work of organization was carried out by medical men who had served during the War of the Rebellion Their duties and experience as Army medical officers had impressed upon them the value of preventive measures and each, having influence in his own State, became an important agent in promoting the progress of public sanitation Derby in Massachusetts, Rauch in Illinois, Hewett in Minnesota, Baker in Michigan, and many other pioneers of State medicine in this country were volunteer medical officers during the war

Many of the annual reports of municipal boards contain valuable papers in the form of reports of committees on the local water supply, drainage, sewerage, etc , and on the measures adopted for the suppression of epidemic diseases The reports of the State boards also are mines of sanitary information

But you will readily understand that just as there are subjects of sanitary import that exceed the jurisdiction of a municipality and require the intervention of State authority, so there are subjects so extensive as to reach beyond the lines of a particular State, although of the greatest importance to the well being of the people of that State One which is calling for federal legislation at the present time is the prevention of the pollution of rivers and other natural sources of water supply, the people of one State who drink the water having no authority over the sewage disposal of cities in an adjoining State by which it is contaminated To preserve the people of the whole country from insanitary conditions a perfect cooperation is needful among State and local authorities A good understanding prevails among medical and sanitary authorities, but these are too often powerless to accomplish the end in view Municipal authorities and State legislation view the sanitary proposition from the financial standpoint, and they are not likely to authorize the expenditure of funds for a special and costly method of sewage disposal that the water supply of some other State or city may be protected

The protection of the coast line against the importation of cholera, yellow fever, smallpox, etc , is also a subject on which there must be either a perfect cooperation among local authorities or a federal supervision, for an efficient quarantine at one seaport is of no value to a country if the disease effects a landing through the inefficiency of the service at another port There are also many questions concerning protection from indigenous diseases, such as consumption and typhoid fever, which are of interest to all the States, and which could be studied to better advantage under national auspices than by the individual and uncoordinated efforts of the several States

For these reasons most of the medical and sanitary men of this country are anxious to see established a National Board of Health In this respect the United States is behind the age The English have a central health authority called the Local Government Board, which comes, when necessary, to the assistance of the local health authorities Germany has its Imperial Board, which has become famous by the work of Dr Robert Koch in its laboratory Our Mexican neighbors have a Superior Board of Health for coordinating the work of the State boards, and even Japan, the latest national adjunct to modern civilization, has a Central Board of Health

In 1871 a number of sanitarians met for the purpose of organizing an American Public Health Association One of the objects of this Association was to secure legislation on behalf of the public welfare, and particularly to obtain federal recognition of the importance of the subject by the establishment of a National Board of Health But its efforts in this direction were neutralized by an argument based on the unconstitutionality of such a board In the cession of certain of their powers by the States to the Federel Government for the general protection, the police powers of the States were not included The right of the local authorities to be supreme in such matters prevented action by the general Government A few years afterward, however, the disastrous epidemic of yellow fever which devastated the South in 1878, so overcame the State's rights doctrine in connection with health matters that the strongest supporters of a National Board of Health were the members of Congress from the Southern States A bill establishing a board was passed in 1879, and this Board did excellent service in protecting the country from imported disease, and in promoting sanitary work in the various States Under the impetus given to sanitation during the few years of its existence boards of health were organized in most of the States, and these latter fostered the organization of local boards and kept up close official relations with them, so that nothing of a threatening character could occur in any part of the State without an immediate reference to the State Board for advice or assistance

The National Board was ultimately destroyed by the continued operation of the influences which opposed its organization The Marine Hospital Service now conducts the duties of maritime quarantine on the lines established by the National Board of Health, but this service does not fulfil the purposes of a federal board in questions of internal sanitation Medical men and sanitarians are therefore as earnest at the present time as they were in 1871 in their efforts to secure national health legislation, and as the President in his message to Congress last year indicated its necessity, there seems some prospect that this country may soon have a central or federal sanitary bureau or even a Department of Health, as urged by the American Medical Association

I have given you this general sketch of the progress of hygiene and sanitation that you may be better able to appreciate the relations of military to public hygiene, for the Army medical officer in time of peace has usually a civilian settlement attached to his station for which he must act as health officer, and in time of war the sanitary interests of large sections of the country may devolve upon him

At our next meeting I shall bring you into more immediate contact with the military branch of the general subject of hygiene and sanitation

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REMARKS ON CLINICAL CASES

I PHLEBITIS AND PERIOSTITIS FOLLOWING TYPHOID FEVER, II ACUTE BRIGHT'S DISEASE, III POST-HEMIPLEGIC TUMOR

Lecture delivered at the Pennsylvania Hospital, Nov 9, 1895, Reported stenographically for the Journal.

BY J M DaCOSTA M D, LL D

PHILADELPHIA

EMERITUS PROFESSOR OF PRACTICE AND THEORY OF MEDICINE IN THE JEFFERSON MEDICAL COLLEGE

Gentlemen —You will be interested, I think, in seeing the progress of some of the cases that were before you at our last clinic, a series of cases illustrating sequelæ, of unusual occurrence in our day, of typhoid fever This young man was the case of femoral phlebitis, phlegmatia dolens it was formerly called, or milk leg, which an accurate pathology has taught us to now regard as phlebitis You will recall that I directed your attention to the course which this ran, how it began in the right leg, how that leg became tense, painful and swollen, how the swelling gradually subsided, except along the course of the femoral vein Now, it had hardly subsided before we began to notice swelling and tenderness in the calf of the other leg We next observed some swelling over the glands in the groin and tenderness over the left femoral vein, the most marked features, however, being the tenderness in the muscles of the calf Recognizing this as a phlebitis in this limb, we began the treatment as before, by elevating the limb, making applications of witch-hazel distillate, and administering the tincture of the chlorid of iron, internally I am happy to say that under this treatment, the inflammatory condition has subsided, the swelling and pain, and the tenderness in the calf, which at the beginning were such marked symptoms, have disappeared There is now no longer any tenderness along the femoral vein and the swelling of the glands has also gone In fact, the man is perfectly well except that he must be cautioned against standing much upon this leg for the present, or using it much in walking, for a certain amount of edema will result from using the limb too soon

The interesting fact in this case was the early and valuable diagnostic sign that we obtained from the tenderness in the calf, which indeed was the first manifestation of the phlebitic process The patient is now convalescent, but he may continue the tincture of iron three times a day, with a good diet

Having disposed of that case, we can briefly dispose of the case of periostitis following typhoid fever

Here, gentlemen, is the case, which I told you was regarded as one of periostitis of the tibia following typhoid fever There was much swelling over the front of the tibia extending along this bone, but tenderness upon pressure and pain were the most marked features There was slight elevation of the bodily temperature, which no longer is present This morning there is no tenderness, and the swelling of the covering of the bone has subsided, although the patient still complains of some soreness of the skin where the blister was applied He was, indeed, treated with blisters over the site of tenderness and he was kept at rest in bed, with the foot slightly elevated He is well, and nothing more need be done for him

ACUTE BRIGHT'S DISEASE OF THE KIDNEYS

The next case is one of acute nephritis, one of a kind we see frequently in practice

The patient is a sailor, 21 years of age, who has been much exposed at sea He was brought here with the statement that he had had some form of obscure fever at sea, of which the exact history can not be now ascertained Following this fever, he had an eruption of some character upon his legs and face We also know nothing about this eruption, although from his occupation we may have our surmises as to its specific character, yet we can know nothing about it The eruption upon the legs may have been caused by some local application of the nature of which we are not informed, it may have been some preparation of coal oil He says that he did use some application and that it was followed by this eruption besides a good deal of inflammation There was desquamation after he came into the hospital This was the only history we could obtain of the case

When he was admitted his temperature was 102° in the evening and a slight decline took place next morning The fever temperature gradually subsided, and this morning it is 100 6 ° When he came in, his face was very much swollen As you perceive, it is still somewhat swollen, but nothing like it was on admission His legs were swollen also, they are less swollen now You see this curious eruption upon the legs When my attention was first called to it, I was asked if it was smallpox in its declining stage, but it has none of the characteristics of smallpox I believe that it was due to some irritant, like coal oil, some application which was made while at sea Of course, as already hinted, as he is a sailor we might assume that it is due to syphilis, but as it is limited to the legs, this is against that view Moreover, he positively denies anything of the kind, or that infection exists Upon thinking over the case, it occurred to me that it possibly might be due to some strange blood eruption, like the eruption of purpura, but the fact that it is found only on one part of the body, the legs, and that it is papular instead of being petechial, decided against this also I then concluded that while the exciting cause was an irritating application, the subsequent course of the eruption was due to the course of the disease What disease? Well, from the general appearance of the man, his puffy face and evident anemia, I concluded that it was a case of Bright's disease The urinary examination confirmed this view Here is the statement Urine reddish, with a flocculent sediment, acid in reaction, specific gravity 1022, albumin present in large amount, no sugar Some finely granular and epithelial casts and much debris, urates, etc The daily quantity when he came in was twenty ounces, therefore scanty Yesterday he passed forty seven ounces

With this large amount of albumin and scanty urine, with swollen face and fever, there was no doubt that we had here a case of acute nephritis, one of the forms of Bright's disease If you ask, What did it follow? we can not here be certain, we simply take it as a case of acute Bright's disease, with inflammation in the tubular portion of the kidney and exudation and swelling interfering to a considerable extent with the function of the kidneys and causing scanty albuminous urine This condition may follow cold and exposure, it may follow acute rheumatism And especially is it seen in persons who are rheumatic and are then exposed to cold and dampness It frequently follows scarlet fever, and the thought may occur to you that this is a case of acute nephritis following scarlet fever It is true he had fever on board ship, and an eruption, the character of which we do not know, nor can we ascertain the nature of the feverish attack Gentlemen, we will have to leave this as a matter of doubt, but I rather incline to think that it was not scarlet fever The man himself states that he had no fever, but we know he must have had some because he came in with a fever But that is a matter of no great significance, the main point is the condition in which we find him at present Let us inquire into the future course of the disease and whether it will recur We will also take up the question of *treatment*

Acute Bright's disease is an inflammation of the cortical portion of the kidneys, they become swollen up, congestion and exudation occurs, serum and blood corpuscles enter the tubules and appear in the urine Epithelial, hyaline and granular casts and blood elements are detected with the microscope Under favorable circumstances and with good management, these all disappear Nine out of ten cases recover perfectly, the tenth case may not recover, that is to say, the condition may pass into a chronic nephritis and the large white kidney may result Recovery is therefore the rule in acute nephritis *under treatment*, but this presupposes care and treatment and does not take into account a possible occurrence—there is always a danger of these inflamed kidneys suspending action and producing uremia and convulsions Therefore, while the prognosis is, on the whole, favorable, it is so only under proper treatment If this can be obtained the prospects are that the albumin will slowly disappear from the urine and the kidneys slowly resume their functions But these patients, in the future, after fresh exposure, will be likely to show a small amount of albumin in the urine So much for the prognosis The diagnosis is an easy one The swelling of the face and limbs, the presence of albumin in the urine, the small quantity of urine, the presence of tube casts—all these make up a clear and distinct diagnosis of acute nephritis In what stage of the disease was this man when he reached us? Was he still in the acute stage, or had it passed? It had passed, the disease had reached its height before he came in Why do I say this? Because there was no blood in the urine During the first week or longer there is blood in the urine and blood casts, casts with blood cells on them, with very many leucocytes You recall the fact that this man's urine had no blood and no mention is made of leucocytes We must conclude then that the most acute stage had passed before he came into the hospital

Now as regards the treatment The most important points are to act upon the skin and the bowels and to keep the kidneys flushed, by diaphoretics, cathartics and diuretics You must use derivative treatment, while putting the patient upon the blandest diet, chiefly fluid, with a view, as I have just said, to keeping the kidneys flushed How is this to be effected? The best remedy in the treatment of acute nephritis with which I am acquainted is digitalis Indeed, it is an interesting fact in medical history that digitalis had a reputation in connection with disease of the kidney long before it had gained its reputation in disease of the heart In this case it is given as a diuretic, and I shall frequently have occasion to point out its value in the treatment of similar cases The preparation I prefer is the infusion, giving half an ounce four times a day Under this treatment the urine has increased from 20 to 47 ounces in the case before you In addition, so that nothing in the diet should irritate those inflamed kidneys, we placed the patient upon a milk diet, he has had an absolute milk diet and nothing else since his admission We usually allow in addition a certain amount of fluids, such as weak tea, or any natural diuretic water If you are not sure of the quality of the water, use distilled water, as the most important element in these waters is the water itself In this way you keep the kidneys flushed out by using water As long as the patient is passing 47 ounces daily, I am satisfied In addition we purged this man with one or two drachms of Rochelle salts, given each morning Then we also acted upon his skin, and there is nothing better for this than a vapor bath This can be easily arranged by means of a few hot bricks, but where it can not be carried out, you can resort to some diuretic Jaborandi or its alkaloid pilocarpin may be used, the latter in doses of one-sixteenth of a grain, given three or four times daily, would be very serviceable We have not used it here, as we used the baths instead

Under this treatment, there is no doubt of this man's ultimate recovery, provided he escapes uremic accidents, and I hope to be to be able to show him to you before he leaves the hospital without a trace of albumin in the urine I must speak of one more feature in these cases which I omitted, that is the fever The degree of the fever is not high, the temperature going as in this case, to 102° or 102 5°, but not much higher than this

POST HEMIPLEGIC TREMOR

Here is a man of whom as yet I know very little, as he has been in the hospital only a very short time His name is J S, he is 58 years of age, colored, a clergyman by profession The notes taken upon admission state that his family history shows no hereditary taint He has used tobacco in moderation, but no alcohol for many years He has been ill for nearly two years He is subject to attacks of cardiac asthma, or dyspnea, with pain around the region of the heart He has had a few attacks of epistaxis and also has had attacks of hemoptysis He says that suddenly, while preaching one day, he found that he could not raise his left arm or move his left leg, nor could he close his left eyelid Note this curious fact—all this happened while he was preaching His speech was not affected nor did he lose consciousness, in fact he hardly noticed that anything had happened to him He was admitted into the hospital about eighteen months after this occurred During these eighteen months his general health was fair and he regained some power in the left hand and in the leg also, but was able to walk only a short distance Just before admission he had another slight attack He did not notice this himself, but his daughter says that he became weak and his mind was distinctly clouded It is not known whether or not there was any additional loss of power

Since his admission, we have learned that he had lost flesh during the past year, that his mental condition had become enfeebled, that he has had attacks of giddiness, and that he is subject to slight headache, but this he has not complained of since he came into the hospital Headache has not been a prominent feature His temperature has been running about normal, with slight variations His respirations are 20 to 27 to the minute His pulse 86 to 90, somewhat irregular, every now and then intermitting a beat The radial artery is resistant to the touch When I listen to his heart, I find a distinct, harsh, mitral, systolic murmur, and an accentuated pulmonic second sound The apex impulse is diffused and only of moderate force There is some hyper trophy, but only of moderate extent That is with regard to the heart The urine is passed involuntarily and it is impossible to get at the exact amount, as he generally passes it in bed It contains a trace of albumin, of specific gravity 1018 and neutral in reaction The bowels are irregular The tongue is coated, flabby, and deviates a little to the left when protruded He has some control over the left arm, but note the tremor as he raises the hand He says it has trembled a great deal My impression is that there is a very slight tremor when the arm is at rest and a very distinct tremor when he attempts to move the hand The legs do not tremble This tremor is associated with loss of power to some extent in the left hand and arm Sensation is diminished on the left side You observe that these pin points on the fingers, separated a considerable distance, are felt as one Sensation is therefore diminished but not abolished on the left side

Now, gentlemen, what is the matter with this man? He can walk, but has loss of power in the left leg and loss of power in the left arm and hand There is stiffness in the muscles of the left arm, and some wasting We have tested the electrical condition of the muscles and find that there is beginning reaction of degeneration, though not marked There is diminished sensation and power, but not complete paralysis There is also tremor in the left hand What has happened here? What was the original disease and what has been its course, and what is occurring now? The original condition was one of cerebral embolism It was a clear case The loss of power came on suddenly in the arm and leg, occurring—and I lay great stress upon this—without loss of consciousness He went on talking, with complete loss of power on the left side of his body, showing that you may have hemiplegia without loss of consciousness When this occurs, in nine cases out of ten it is a case of cerebral hemorrhage Here you have an additional reason for this diagnosis in the disease of the heart A small plug has been washed from the mitral valves and carried into the smaller vessels of the brain and shut off the blood supply to the motor centers of the left arm and leg

What has happened since the embolism occurred? What often happens in these cases of cerebral embolism—the mental condition has been impaired Following loss of nutrition in the cortical centers and impairment of function, degenerative changes in this area have taken place While, as so often happens, there has been some recovery of power, the power has not been entirely restored But this loss of power is not so much what I wished to show you, as the tremor of the left hand, a spasmodic trembling often associated with disturbance of functions Now, gentlemen, this is a condition much more common in cases following embolism than in paralysis from rupture of vessels, and it indicates, in nine cases out of ten, a clot in the vessels rather than an effusion of blood

You ask the cause of the tremor? Why should the man have a trembling hand, a tremor that has been termed post hemiplegic chorea? It is extremely difficult to give any definite information upon this point The tremor with the spasm that may complicate it is due to a deficient blood supply in the motor centers in the brain, either of the cortex or elsewhere Disturbance of nutrition is followed by disturbance of function, and under certain circumstances by structural change and degeneration While this explanation is not easily proved, yet we know that a certain amount of blood supply is necessary to maintain a condition of healthy nutrition, without it, an altered nutrition with tremor and spasm occurs Now, you may ask where this lesion was located Considering the hemiplegic and hemi anesthesia on the left side, it affected the right side of the brain and points to the internal capsule involving the posterior thoroid

Let me briefly speak of the treatment of this case The patient is to be kept as well nourished as possible Keep the bowels acting and watch the kidneys In the early stage of the disease possibly iodid of potassium may do good, but where it has existed as long as it has here, we can not expect very much from it We will give him the syrup of hypophosphites He shall have gentle massage and good diet We will caution against exertion and advise rest Otherwise no special treatment is needed as there is no way of repairing these damaged valves which involve, by their ultimate effects, far more serious consequences than their original attack

ORIGINAL ARTICLES

NOTES ON RETENTION OF URINE FROM URETHRAL STRICTURE

Read before the third district branch of the New York State Medical Association

BY JOHN W S GOULEY, M D
SURGEON TO BELLEVUE HOSPITAL NEW YORK.

The purpose of these notes is to recall attention to some of the ready and simple methods of relieving sufferers from the distress caused by retention of urine due to urethral stricture This kind of urinary retention is seldom sudden, it is ordinarily preceded by difficult urination, whose increase—from month to month, from week to week, from day to day—is proportionate to the diminution of the urethral caliber at the diseased point, and also to the degree of muscular spasm of that part of the canal For several weeks prior to complete retention, although urination be very frequent, the bladder is not emptied, this constitutes incomplete retention of urine which, from its stagnate state, soon gives rise to cystitis At length the urine ceases to flow, there is then complete retention This urine, accumulating for thirty-six or forty eight hours, begins to slobber involuntarily, when the complete relapses into incomplete retention

The laity often regard involuntary escape of urine as cause rather than effect, and endeavor to repress the "undue flow" by sundry processes which, fortunately, prove ineffectual Meanwhile the vesical distension increases, and unless the patient invokes a physician's assistance without further delay, the urethra is likely to burst behind the stricture and give issue to the urine, which infiltrates and destroys the connective tissue of the perineum and scrotum In rarer instances of inordinate vesical distension, a fall, a sudden movement of the body, or a violent struggle during anesthesia has been known to cause rupture of the bladder

Long standing incomplete retention of urine with spasm of the bladder is much more serious than the retention which becomes complete in the course of a few weeks for, in the first-named condition, the upper urinary organs are often irreparably damaged and the prognosis is generally unfavorable It is before the advent of these untoward effects that the greatest good is to be accomplished Therefore, experienced physicians recommend the early treatment of stricture as preventive of retention of urine and its ill consequences, but their instructions are seldom followed, and the responsibility rests with all unruly patients who are too apt to seek advice at the last moment, when the bladder is distended to its utmost degree and the suffering is more than can be longer endured, even by the most stolid of men, after divers nostrums have been tried and found wanting in efficacy

It is too common in such cases to resort to cutting operations, which are indicated only after failure of careful catheterism with filiform bougies, or after repeated supra pubic capillary puncture of the bladder and aspiration of the urine In ordinary cases it is possible to give prompt relief by making some preliminary dilatation of the stricture, beginning with a No 1 soft, olive pointed bougie, and continuing the dilating process by passing successively Nos 2, 4, 6 and 8, after which it will be easy to use a No 7 curved web catheter that serves to allow the urine to flow slowly until about two thirds of the amount contained in the bladder shall have escaped The catheter is then plugged at its free extremity, is fastened in position, but is not retained more than thirty six hours, during which time some urine is drawn off every three hours, and the bladder finally emptied a few moments before the instrument is withdrawn After this the stricture is gradually dilated by using bougies of increasing size every third or fourth day until the normal caliber and suppleness of the urethra is restored Without preliminary dilatation by means of small bougies, it is usually difficult and often impossible to introduce a necessarily small web-catheter by reason of its undue flexibility as soon as it is warmed in the uretera The insertion of a metallic stylet in a small web-catheter is not prudent on account of the possibility to perforate the instrument and the urethra, even when the manipulations are carefully and gently conducted

Any stricture amenable to the method of treatment above described may be regarded as an easy case The physician is, however, liable to be called to minister to cases that are not manageable with regulation bougies Like cases have been related with the paradoxical title "The way to pass impassable strictures," or "How to pass a bougie when it can not be passed" These surgical bulls have come forth from time to time during the past three decades The meaning sought to be conveyed seems to be, in the first case—how to pass strictures that are impassable by ordinary instruments, and in the second case—the kind of bougie to use when the common sort fails. These ideas could have been more briefly expressed by—catheterism in difficult cases.

The difficult cases are those of very narrow, eccentric, tortuous, dense and resilicut strictures, which are accompanied by inordinate spasm of the muscular layers and are seated in the perineal region of the urethra. A second narrowing in the penile region is generally a troublesome complication which often necessitates internal urethrotomy.

A debauch, in wine or venery, is commonly the excitant of complete retention of urine. In such a case the urethral mucous membrane is likely to be swollen and sensitive, and to bleed freely as soon as a bougie is passed. As a general rule, when catheterism is not deemed expedient, the bladder is punctured above the pubes with a hollow needle, through which the urine is aspirated and, if necessary, the operation is repeated until suitable instruments can be used to treat the stricture.

One of the simple and ready methods of entering a narrow stricture, whose lumen is eccentric, is by means of a filiform probe-pointed whalebone bougie, elbowed at its extremity. This instrument is used as an explorer of the narrowed canal and is quickly passed through the stricture in nine out of ten difficult cases, and serves as a conductor for a No. 1 or a No. 2 conical curved steel staff, grooved along its convexity, and having a canal or tunnel two or three millimeters in length, beginning at the blunt point of the instrument and ending in its groove. Through this canal is threaded the bougie, which guides the staff into the stricture, dilating it sufficiently to permit the introduction of a larger tunneled sound, then a third, fourth, fifth, and so on, until divulsion occurs. After this a tunneled catheter is substituted and enough urine is drawn off to relieve the distress caused by distension. The bladder is not completely emptied until the second day. The object of delaying to empty the bladder is to guard against vesical hemorrhage, which is so likely to occur after the sudden withdrawal of all the urine in cases of long-standing distension of the viscus, particularly in elderly men.

It sometimes happens that stricture is so dense that it can not be dilated by the tunneled sound beyond No. 2 or 3. In that case a tunneled catheter No. 2 or 3 is substituted, and through this instrument the urine may be aspirated if necessary. Then a small web-catheter is passed and fastened in position for forty-eight hours, during which time the urine is allowed to trickle out, partly through and partly beside the instrument. On the third day it is generally possible to carry on dilatation with less difficulty and, if needed, the process of continuous dilatation may be repeated until the stricture shall admit a bougie of the size of the normal caliber of the urethra. When, however, a stricture seated in the perineal region can not be entered with any kind of bougies, after repeated trials, it is proper to resort to its external division, with the double object of curing it and of relieving the distended bladder.

For some years past there has been a pernicious fashion of dilating the strictured urethra to an excessive extent and of using the dilators with undue frequency. In the many cases so treated the consequence has been a total loss of the urethral suppleness due to sub-acute urethritis, with extensive infiltration of round cells and their subsequent transformation into scar tissue, so that the canal, although greatly increased in caliber, is in a state of permanent contracture.

Men of dissolute habits, like the cases presently to be stated, seldom return for radical treatment until they are again suffering from retention of urine. Narrow resilient strictures are not permanently cured by any method of treatment whatsoever, unless the treatment is followed by the persistent use of dilating instruments, once every week or ten days, for at least three years. Some patients need the use of such instruments for many years, if not for life,

The following recent cases may serve to illustrate the efficiency of tunneled sounds and catheters in difficult cases of urethral strictures with complete retention of urine.

W. L. S., 28 years of age, was admitted to Bellevue Hospital on the 8th of April, 1895, suffering much pain from retention of urine, which had become complete thirty-six hours before. He had had three attacks of urethritis, the first, twelve years, the second three years, and third, eight months, before admission to the hospital. The first attack lasted three months, the second, four months, and the third merged into a gleet which existed at the time of his final retention of urine. During the eight months prior to admission, he had repeatedly had complete retention of urine after great abuse of ardent spirits, but was each time spontaneously relieved, except after the last debauch, which began early in April, 1895, when, on the morning of the 7th of that month, the retention persisted, but he did not apply for medical aid until the following morning, and the physician employed undue force in using the catheter, with the only result of drawing blood instead of urine. With his bladder distended to the level of the umbilicus, the patient was conveyed to the hospital on the afternoon of the 8th of April. Exploration of the urethra revealed a narrow stricture in the region of the bulb, and a false passage anterior to the stricture. The urethra having been filled with oil, an elbowed filiform whalebone bougie was passed through the stricture and, reaching the bladder, was used as a conductor for Nos. 4, 6, and 8 conical tunneled sounds with which the canal was rapidly dilated, when tunneled catheters Nos. 7 and 10 were introduced, and eighteen ounces of urine drawn. The patient was then sent to bed after he had taken ten grains of quinine. No anesthetic agent had been administered. Three-quarters of an hour afterward he passed spontaneously five ounces of urine without, however, emptying his bladder. In two days the stricture was dilated to No. 12 (English gauge), on the fourth day, to No. 13, and on the eight day to No. 14 which has since been introduced every fourth day. The patient has experienced no untoward effect and has been able to urinate at ordinary intervals, in a large stream, and to empty his bladder. It is scarcely necessary to say that antiseptic precautions were taken in the treatment of this, as well as in the many other cases of urethral strictures received in the hospital.

E. T., 50 years of age, was admitted to Bellvue Hospital, on April 22, 1895, in a profound state of alcoholic intoxication, suffering from complete retention of urine of forty-eight hours standing. His bladder was distended beyond the umbilicus although urine had been slobbering out for twelve hours. He was an habitual excessive drinker and his final debauch had lasted three days He had had three attacks of urethritis in the course of fifteen years, and had suffered retention of urine three times during the twelve months prior to his admission Once the bladder was relieved of its burden of urine by supra pubic capillary puncture and aspiration There were two dense, narrow strictures, one in the penile, one in the perineal region of the urethra Very soon after admission he was successfully catheterized with a filiform whalebone bougie and tunneled instruments, beginning with No 2, and carrying the dilatation to No 6, when twenty eight ounces of clear urine flowed through the catheter, this being about two-thirds of his bladder contents An olivary bougie No 5 was then passed and retained in position twenty-four hours, the urine oozing beside the bougie after a few hours The usual dose of two grains of quinin was administered Dilatation of the strictures was continued every second day, and at the fourth and fifth sittings No 8 was easily introduced In the meantime the patient urinated in a good stream at regular intervals Dilating instruments were used every fourth day until No 13 could be easily passed The patient was advised to continue this treatment indefinitely, and was discharged at his own request on the 27th of May

The writer has employed this method of treatment, in upward of five hundred difficult cases of urethral stricture, with a degree of success that warrants an earnest recommendation of its more general use In the great majority of these cases *no anesthetic agent* was administered, because the operation is not very painful, because it is of short duration, because of the danger of vesical rupture incurred during the struggles of the semi conscious patient in the second stage of anesthesia, and because of the ill effects of some anesthetics—particularly ether—upon the kidneys The mortality has not exceeded three per centum and has been due mainly to advanced disease of the bladder, ureters, and kidneys

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SUSPENSION OF THE UTERUS

THE OPERATIVE TREATMENT OF RETROFLEXION BASED ON A CONSIDERATION OF 200 CASES

BY HOWARD A KELLY, M D

BALTIMORE MD

At the meeting of the AMERICAN MEDICAL ASSOCIATION in Baltimore in May, 1895, I made an address before the Obstetrical and Gynecological Section on the subject of the "Operative Treatment of Retroflexion," taking as a basis of my remarks the 170 cases upon which I had operated since coming to Baltimore six years ago Since May I have added thirty more cases, bringing the total up to exactly 200 All but a few of these cases were operated upon in the Johns Hopkins Hospital, the others were patients in my private sanatarium

The mortality in the 200 cases has been zero, and there has not been a case of serious illness following the operation There has been one recurrence of the retroposition, making the failures one half of one per cent In about 5 per cent of the cases stitch-hole abscesses and separation of the lower angle of the incision occurred, this accident very rarely happens now with my present technique in closing the abdominal incision

The suspensory operation was abandoned in one case recently because the enlarged uterus was so friable that the stitches cut out as soon as they were tied

In all cases where the vaginal outlet was relaxed it was repaired at the same time the uterus was suspended, when there is both retroflexion and relaxation of the vaginal outlet, if I can do only one operation, I prefer to lift up the outlet under the pubic arch It is well known that I have always been an earnest advocate of the direct method of treating retroflexion by a small abdominal incision, bringing the uterus into anteposition and holding it there by two stitches through the anterior abdominal wall and the posterior surface of the fundus I am influenced by four principal reasons in continuing this method of treatment, which I originated nine years ago, these are

a A natural tendency to continue an investigation in the line already opened up (see *American Journal of Obstetrics*, January, 1887)

b The advantages of a direct inspection of the ovaries and tubes, as shown by the cases of inflammatory adhesions found at the operation, where it was not known that any had existed In one case I was fortunate enough to find a little papilloma, not as big as the end of my finger, starting out of the ovary When the uterus is adherent no other method can be so good, as this is the most direct way of dealing with the adhesions

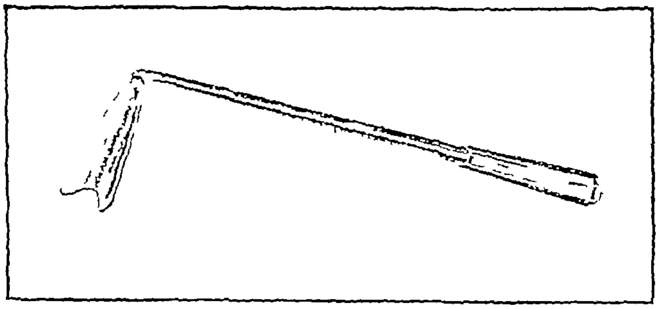

FIG 1—Elevator which serves to hold uterus up while first stitch is being passed

c The mechanical advantages of my suspensory operation acting directly on the posterior surface of the retroflexed fundus, are better than the same organ held forward by pulling on the round ligaments on both sides

d Probably the best reason of all is the remarkable statistics of my 200 cases without a single death, and with but one recurrence of the displacement in a patient in whom a tube and an ovary were removed at the same time

With this introductory statement I present my address substantially as given at the Music Hall last May, with the analysis of the first 170 cases The last thirty are more recent and may, therefore, be left out without disadvantage

I hope the illustrations which accompany my paper will help make clear some points which are difficult to describe away from the actual demonstration on the patient

I have adopted the same " Suspensio Uteri" as more correct than " Hysterorrhapy " which is a plastic suture of the uterus, or than " Ventrofixation" or " Hysteropexy," both of which, though widely used, give a false impression of the results obtained If the operation is properly performed the fixation (*pexy*) of the uterus lasts but a short time, after which the organ is found mobile with fundus well forward in an easy natural anteflexion, and with a marked space between it and the abdominal wall to which it was attached

The casts forming the basis of this report are all of my operations between Oct 16, 1889, and May 1, 1895, and they include all the cases I have ever operated upon by the method I shall here describe as the best

In my earliest efforts to hold up the retroflexed uterus in anteposition I utilized first the cornu uteri and then the anterior face of the broad ligaments, taking by preference the round ligaments close to the uterine attachment as recommended by Olshausen

Most of these cases held well, but some eventually dropped back and the old symptoms returned The reason for this (as I pointed out in my first paper in the *American Journal of Obstetrics*, Jan 1887, p 33), is clearly that the uterus is put in a position of mechanical disadvantage when the anterior face is drawn up against the abdominal wall above the symphysis

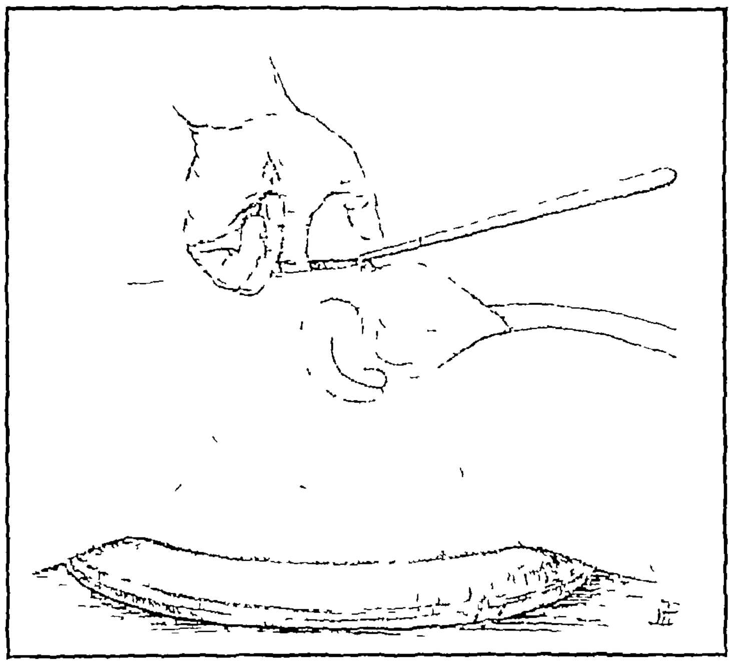

FIG 2—Elevator in and hand holding uterus in place while first stitch is passed through posterior surface of fundus

The best way to do the operation is to bring the uterus into anteflexion by passing the sutures through its posterior surface In this position a slight force will hold it better than a much larger one where the fundus thrown back by bringing the anterior face against the abdominal wall

Indications for Suspension—The indications for suspension of the uterus are the existence of a retroflexion which cannot be corrected or whose symptoms can not be relieved by non-operative treatment, such as packing, massage, and pessaries

I would use it in all those cases of retroflexion which, as Dr Beverly MacMonagle of San Francisco puts it, are more or less tied to the office of the physician by their ailment, patients who may go for years, better at times and then worse again for several weeks or more, and never feeling quite well

I would also urge a suspension where the menstrual difficulties, backache and bearing down pains, headache, loss of appetite, difficult defecation, and various general disturbances are persistent

The classes just cited are easily recognized because their pelvic symptoms are so prominent as to attract attention at once, but there is another class of neurasthenics equally important, whose local symptoms may be more or less in abeyance, and the first impression is that the neurotic condition is primary and fundamental, and the local disturbance merely accidental I know of no class of cases where a good professional instinct and good judgment come into better play in selecting the suitable case and rejecting the others

In a woman who is persistently neurasthenic, or in one who after repeated building-up efforts persistently falls back into a morbid neurotic state, where there is a retroflexion or retroposition, with definite pelvic disturbances becoming more marked at the menstrual period, I would without hesitation urge suspension

A young woman came under my care three years ago, through the courtesy of Dr I E Atkinson of this city She had been bed-ridden for four years, most of which time she had spent in a hydropathic establishment securing imaginary improvements. She was a typical hysterical neurasthenic, as she lay drawn up in bed with a miserable pinched look, apparently oblivious, but really taking in all that was going on about her

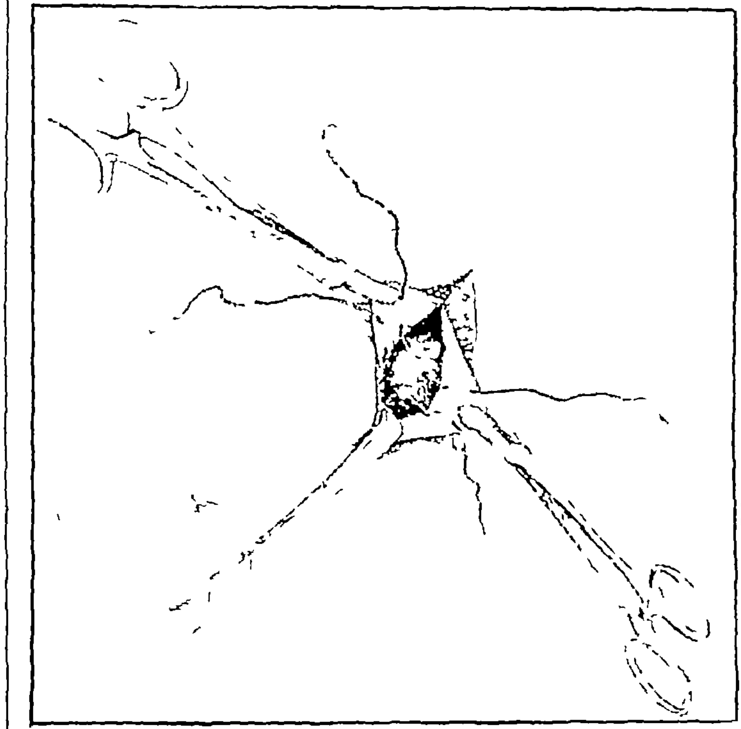

FIG 3—Two silk sutures in place in the posterior surface of uterus near fundus, not yet tied

She had that peculiar expression which is so easily read and which forbids any appeal to reason and high moral grounds as out of the question The only tangible trouble was a retroflexion, with tenderness and marked disturbances at each monthly period

I first shortened both round ligaments intraperitoneally by Wylie's method, and she began to improve in a remarkable manner, but one day about three weeks after the operation I found her again miserable and depressed, complaining of all her old symptoms Examination showed that the uterus had dropped back to its original position The abdomen was reopened and the uterus suspended by my present method She at once got better and is to day one of the finest and healthiest women mentally and physically that I have the pleasure of counting among my friends I have never seen a greater transformation in any one I would therefore operate for a retroflexion in the hysterical, neurasthenic patient with pronounced pelvic symptoms, and I would do it with the expectation of an occasional failure to give relief One cure like that above is worth even half a dozen failures, provided they entail no disability upon the patients

Operation—following is the method of operation

1 After due preparation, emptying the bladder and anesthesia, the abdomen is slightly elevated and an incision 3 to 5 cm long is made, beginning about 2 cm above the symphysis, down into the abdominal cavity

2 The peritoneum is then caught with artery forceps on each side and drawn out This is to prevent pulling in the peritoneum by the suspensory sutures and leaving none to close the incision

3 The retroflexed uterus is then hooked up and lifted into anteflexion by means of two fingers carried into the wound

4 One side of the incision is then elevated with two fingers, and the peritoneum and subperitoneal fascia caught with a curved needle carrying the suspensory silk ligatures The amount of tissue embraced is about one third of an inch wide and one eighth of an inch in depth

5 The same (ligature) is then conducted through the uterus on its posterior face below the fundus, and finally through the peritoneum and fascia of the opposite side, when it is tied, bringing the uterus up snugly against the anterior abdominal wall If the pelvis is deep and the uterus lies out of reach, it may be brought up and held in position while passing the suture, by means of an elevator such as is figured here This is introduced down into the pelvis in front of the uterus, which is pressed into it and held as against an artificial symphysis As soon as the first stitch is passed the elevator is laid aside After tying the first suspension suture, the second is easily put in, entering and emerging on the abdominal wall just above the first and piercing the posterior surface of the uterus just below the first, when it is tied it increases the anteflexion

6 The sides and front of the uterus are examined to see that no intestine is caught, and the omentum is drawn down, and

7 The abdomen is closed I do this by taking off the forceps and sewing up first the peritoneum with the finest silk, and then drawing together the fascia with one or two silver wire mattress sutures, finally closing the skin with a subcuticular suture of fine silk

The patient may rise sooner, but I find it better to keep her quiet from two to three weeks It is not necessary to wear an abdominal bandage, and I never put in a pessary afterward

It was necessary in one case to reopen the abdomen for a hemorrhage following the operation, this arose from the slipping of the ligature at the cornu uteri, the stump of an amputated tube and ovary There was no trouble from adhesions or incarceration of a knuckle of intestine in front of the uterus in any case

Out of 130 of these cases carefully analyzed for me by Dr George W Edwards for the results, within a few weeks of the operation 100 were reported well, 26 improved, 4 not improved The recovery was interrupted

By a transient mania in 3 cases, by bronchitis in 3 cases, by pneumonia in 1 case, by stitch abscess in 3 cases by hemorrhage from a repaired outlet in 1 case, by dysuria in 4 cases, by hysteria in 4 cases

The proportion between married and single women was about 2 to 1

I am not prepared at present to state the number of children born since operation There have been at least six pregnancies, and in but one was there any marked discomfort and dragging due to the attachments of the womb (*Amer Jour of Obs* 1894, p 370)

I do not know of any case in which the retroflexion has recurred after pregnancy

There has never been a hernia in any case

In women who have borne children the retroflexion is often associated with descensus and relaxation of the vaginal outlet It is useless to expect relief in these cases by simply suspending the uterus which, instead of being gently detained in easy anteflexion, simply drags on its attachments until they give way. In such cases the vaginal outlet must invariably be repaired too Sixteen out of 133 cases needed the vaginal repair In going over my statistics I am surprised to find so few needing this double operation and estimate the percentage at present as certainly much larger

In 7 cases both tubes and ovaries were removed for disease, in 9 cases one tube and ovary removed, in 3 instances I ligated either uterine or ovarian vessels, in 2 a myomectomy was performed, in 1 a nephropexy

THE DISEASES, DEATH AND AUTOPSY OF NAPOLEON I

BY EDMUND ANDREWS, A M, M D, LL D
PROFESSOR OF CLINICAL SURGERY IN THE CHICAGO MEDICAL COLLEGE
SURGEON OF MERCY HOSPITAL, ETC
CHICAGO

Napoleon has again invaded the nation, coming this time on a tidal wave of literature The magazines for two years have been full of him New books describing his campaigns have rapidly appeared, and now at last physicians are beseiged for opinions about his diseases and the causes of his death

The gigantic intellectual power of this man was such that even now, seventy-five years after his death, few writers can look calmly on his career and weigh him impartially for what he was worth They dispute about abont his acts, motives and morals, and take sides for and against him as if he were alive and still riding at the head of his armies

This folly has filled the air of history with a fog which obscures every part of his biography, medical or otherwise However, after much hard work I have so far gotten at the truth that I think I can give a substantially correct account of his diseases and of their influence on his career

The facts of his medical history mainly depend on five writers cotemporary with him, whose works are now old, rare and difficult to find, to whose accounts may be added numerous scattered facts preserved by non-medical persons

The earliest of these five writers was William Warden, surgeon on board H M ship *Northumberland*, which conveyed Napoleon to St Helena During the voyage, and for a month after, Warden was in close and friendly intercourse with the Emperor, and preserved many facts and conversations of his patient, who talked freely to him with a view to the publication of his ideas, hoping thereby to modify some of the prevailing English prejudices Warden published his little book two years later, and it was read to Napoleon by his attendants at St Helena

The Government detailed a naval surgeon named Barry O'Meara to act as Napoleon's physician at the island He was a well-educated man, as education went in those days He lived on the most friendly terms with his patient, but as he would not betray the professional secrets of the ex Emperor's acts and conversation, the Governor, Sir Hudson Lowe, was angry, so that he and the doctor got on very badly together, living in a state of illy suppressed animosity O'Meara was an honest and truthful man, but biased strongly in favor of Bonaparte He kept a faithful diary of facts and conversations for future publication, apparently with Napoleon's approval, and, as he suspected that the irate Governor would seize his sheets, he secretly sent off copies of them to England as fast as they accumulated His diary covers a period of nearly six years

Napoleon kept up a constant quarred with the Governor, whom he called a rascal, or hangman, a hired assassin, and many other names not very endearing After some five and a half years, the Governor sent O'Meara back to England, being suspicious that he secretly helped the Emperor to correspond with Europe O'Meara published his diary in 1822, a year after Napoleon's death, suppressing certain parts which he felt bound by professional obligation to keep private

On O'Meara's removal, the British Government requested Napoleon's uncle, Cardinal Fesch of Rome, to select a successor to O'Meara The Cardinal chose a Roman physician named Antommarchi, who was sent to the island and cared for the royal prisoner until his death in 1821, some nine month's after Antommarchi's arrival

He subsequently published a report, reasonably correct as to physical facts, but full of venomous hostility to the Governor

During the last two months of the patient's life Dr Antommarchi requested Dr Arnott, a naval surgeon at the island to consult with him, which he did and continued to do almost daily until the patient's death, some eight weeks later, in June, 1821 Dr Arnott's report of the consultations and of the autopsy was published He appears to have been a well educated and honorable medical man

Before his death Napoleon directed that a post-mortem examination be made, and that a report of his case be made out for his son

Eight years later, when that son reached his majority, Dr J Héreau of Paris, former surgeon to "Madame Mere," the Emperor's mother, and to the Empress, Marie Louise, carefully examined the reports of the four surgeons above mentioned who attended Napoleon at St Helena, and searched every other accessible source of information about his prior diseases and their causes This semi-official report was printed, and a copy presented to Napoleon s son when he arrived at his majority Héreau was an intelligent medical man, and though full of animosity against the English, and bitterly prejudiced against the Emperor's attending physicians, he handled the scientific facts of the case with an evident intention to be truthful

These five old books, with a few scattering facts from other cotemporary writers, contain about all that is left on record of Napoleon's medical history Naturally, the earlier allusions to his diseases are scanty While he was on the throne everything pertaining to the imperial health was a profound State secret, and for the most part his physicians were faithful to their professional obligations and died without revealing anything Héreau only wrote because the dead Emperor had commanded it, and his son and heir authorized it

Though the known facts were thus scanty, hundreds of rumors all along prevailed about his diseases and death

Napoleon himself constantly charged that he was being intentionally killed by the climate of St Helena, and left on record this sentence "I die prematurely, murdered by the English oligarchy and their hired assassins"

When the news of his death first reached Paris the wildest rumors sprung up and were believed One was that the Governor of St Helena, Sir Hudson Lowe, enticed the Emperor out for a walk and suddenly pushed him over a precipice into a chasm, when a sentinel shot him for being outside the dead-line Another stated that he was suffocated under a mattress, a third that he was strangled in his room, and a fourth that he committed suicide

Napoleon's suite returning from St Helena soon contradicted these wild stories, yet Dr Hereau, writing eight years afterward, said that it was still believed outside of Paris that he was poisoned To this day French writers occasionally speak of him as murdered by the English Dr Héreau himself says there was no murder and no suicide, but he thinks the tropical climate of St Helena was very deadly, and shortened his life

The facts about the climate are these The island is situated in the southern tropics, but the Emperor's residence was in a farm-house called Longwood, 2,000 feet above the sea, where the temperature was never above 75° F nor below 60° There were no marshes on those rocky hills, and no malaria The sea winds were unpleasantly strong, and Napoleon complained of their dampness and coolness and of the frequent showers, but the post-mortem showed that he did not die of any disease of the respiratory organs Decidedly it is a healthy climate for most persons We may therefore dismiss the climatic question with the rumors of murder, etc, and discuss more tangible facts

WOUNDS RECEIVED IN BATTLE

Napoleon's body at the autopsy showed the scars of several wounds, especially on the thighs and legs He told Surgeon Warden that he had eighteen horses shot in battle, and that he received several slight wounds which he seems to have concealed as far as possible One or two of them he even kept back from the knowledge of his surgeon, treating them himself by wrapping wet cloths around them The motive was probably this He found great advantage in giving his army the impression that he was an extraordinary and invincible being, having a supernatural star of destiny that insured victory and protected his person from death It was not judicious, therefore, to allow his troops to become too familiar with the idea that he might be shot and killed like any common man None of his wounds were serious, or left any injury to his health

HIS "MYSTERIOUS MALADY"

Field-Marshal Garnett Wolseley, present head of the British Army in his book entitled "The Decline and Fall of Napoleon," says that in his Russian campaign of 1812 the Emperor began to show the effect of some "mysterious malady" which injured his mental powers He would plan a campaign with all his old-time military genius, but when the fight was actually on, and before the close of the day, his energy flagged, he became drowsy and negligent and let the fruits of his victories slip away from him The Empress Josephine remarked that after great battles, even when victorious, he suffered great depression of spirits and expressed intense dissatisfaction with the results obtained At the battles of Dresden, Ligny and Waterloo, Field Marshal Wolseley says this mental failure showed itself plainly, and his generals noticed it On the day before Waterloo Gen Vandamme said, "The Napoleon we once knew no longer exists The victory of yesterday (Ligny) will yield no fruits" The Minister of War, Carnot, remarked in substance as follows "I no longer know him He used to be lean, shy and silent Now he is fat and garrulous He is sleepy, and his mind wanders He, the man of rapid decision, who resented the proffer of advice, now talks instead of acting, and asks opinions"

Wolseley states that at the battle of Waterloo Napoleon suffered pain in riding, and that he had a table set in the open air in a suitable position for receiving dispatches and issuing orders, where he sat for hours, much of the time asleep, leaning his head on his arms When it became necessary to get him away from the field, he was so drowsy that it was difficult to get him upon his horse

Now all his physicians agree that he was unusually abstemious in drinking, and there is not a shadow of proof that he took opium, so that his drowsiness did not arise from these causes At St Helena he was a poor sleeper, rising at three or four o'clock in the morning and using all sorts of devices to while away the unwelcome waking hours He had, therefore, no permanent lethargic disease

The truth probably is this, taking the Waterloo campaign for an example About a hundred and ten days previously he had landed from Elba In twenty days of intense labor and sleepless energy he had marched to Paris, overthrown the King and taken again his imperial throne There "he worked like a galley slave for eighty-four days," toiling fifteen hours a day to reorganize the Empire, raise an army, put down royalist uprisings, gather money ($20,000,000) for his campaign and march his troops to Belgium All this terrific labor he accomplished while suffering under a genito urinary disease which may have partly weakened his force of will He must have arrived in Belgium exhausted mentally, and physically to the verge of collapse by overwork and loss of sleep

Napoleon was not superhuman His drowsiness and illness at Ligny and Waterloo were presumably due to the above causes A medical man would hardly call his condition a "mysterious malady"

WAS HE AN EPILEPTIC?

In 1810, when Napoleon was in the height of his glory and England was full of the wildest rumors about him, one Louis Goldsmith published a book in which he gathered up every sort of story against him, regardless of its truth or falsity Among other things he said that all honest men would be glad to learn that Bonaparte was an epileptic His proof was the statement of a French theatrical actress named Mdlle Georges Weimar, who alleged that she had been called to spend the night with the Emperor at the palace of St Cloud In the course of the night he was attacked with convulsions, which so frightened her that she screamed aloud and roused the palace, causing the attendants and the royal family to rush in She stated that the Emperor, on recovering from the fit, discovered that her screams had caused the exposure, and that he drove her out of the apartment, throwing her clothes after her

Now it is not incredible that any one should have epilepsy, but the testimony of a prostitute is no proof of the alleged fact The story sounds exactly like one of the lies which prostitutes delight to tell when they seek to increase their importance by relating their wonderful adventures with great men

Goldsmith gives another tale equally destitute of authentication It is to the effect that Napoleon, walking in a partly lighted corridor, met an attendant whom he did not recognize, and that he became frightened, screamed aloud, and fell down unconscious These tales prove nothing

The only other evidences which I can find are these Surgeon Barry O'Meara, who attended him nearly six years at St Helena, mentions that on two mornings the Emperor told him that he was apprehensive of apoplexy, for he had experienced a nervous attack during the night and thought he had lost consciousness a few moments His servant thought he was faint on one of the occasions and threw cologne into his face to arouse him, causing his eyes to smart. This may have been a nightmare Dr Héreau says he was subject to twitchings of the left shoulder and of the corner of the mouth, and also at times to vertigo These symptoms might possibly be with Jacksonian epilepsy, but it is not probable

On the whole, if Napoleon were an epileptic from the date of Goldsmith's book in 1810, to his death in 1821, it must have been known to many physicians, surgeons, staff officers, secretaries, guards, valets, servants and members of the imperial family, and however faithfully they kept the secret during his power and prosperity, some of their tongues would have been loosened after his fall and death The rumors were universal on both continents, but there is probably no truth in them

HIS CUTANEOUS ERUPTION

The memoirs of the Empress Josephine state that Napoleon was "tormented" with an eruption of the skin, caught by using the rammer of a dead artilleryman at Toulon, who had scabies Bonaparte, himself made the same statement to Surgeon Warden, on the voyage to St Helena He said that at the outset of his military career, when he commanded some batteries at the seige of Toulon, two of his gunners were killed, one of whom had the itch Napoleon seized the fallen rammer and proceeded to serve the gun, whereby he took the disease, which was shortly cured by appropriate treatment This trival accident led to a pathologic error The parasitic nature of scabies was not then discovered, and as the patient some months afterward was attacked with a chronic eruption, probably eczema, which "tormented" him at intervals for the rest of his lifetime, he and all his surgeons, including Héreau, supposed that the original disease was imperfectly cured, and had "receded" or "struck in," and produced the general eczema, and also had attacked his internal organs, producing various troubles and among them the urinary obstruction Héreau says the eczema mainly attacked the outer sides of his thighs, but that when it was "driven in" by exposure to stormy weather his internal disorders became very distressing, so that the Emperor acquired a great dread of cold and wet This perhaps accounts for his leaving the field durthe rain storms at the battles of Dresden and Ligny

I assume that the eruption was eczema Josephine's statement that it "tormented" him implies that there was severe itching, which fact shows that it was not syphilitic, since eruptions of the latter disease do not itch He made free use of baths, probably to relieve the trouble, often taking his breakfast while sitting in his bath

HIS URINARY TROUBLE

During the Russian campaign in 1812, Napoleon began to have difficulty in expelling his urine It was attributed to the effect of the cold in causing a "recession" of his eruption to the internal organs It gradually got worse and continued throughout the rest of his life

In the midst of the most important business he was often obliged to retire suddenly to relive himself In field service he acquired the habit of leaning his head against a tree or a wall, and in that position with difficulty and pain forcing out his urine He seems to have suffered severely, for he once remarked to an attendant, "This is my weak part It is this which will ultimately cause my death"

These are the actions of a man who has a mechanical obstruction of the urine accompanied with cystitis The three usual causes are enlarged prostate, calculus, and stricture of the urethra He was too young to have a senile prostate Nine years after a few small calculi were found at his autopsy, but had they been there nine years they would have been very large There can be but little doubt that the trouble was urethral stricture with cystitis As his amours were very numerous, the stricture presumably had the usual origin in gonorrhea The urethra was not examined at his autopsy, but the bladder was opened It was found very much contracted, and contained a few small calculi The kidneys seem barely to have been looked at, but not opened The left one was narrower than the right, and lay turned over and adherent to the sides of the vertebra Presumably it was a kidney contracted by inflammation Nothing was known at that time about the relations of nephritis, albuminuria, and uremic poisoning Four years before his death, while his general vigor was still fairly good, he began to have dropsical swelling of the feet and legs, and as his heart was not diseased he probably had chronic nephritis The sequence of events seems to have been this

1 An attack of gonorrhea
2 A stricture of the urethra
3 A cystitis
4 Nephritis, with a few small calculi
5 Albuminuria, dropsy of the legs, and uremic poisoning in a moderate degree

This may have impaired the action of the brain and the mind, and caused some of the defects of skill in battle noted by Field-Marshal Wolseley There is no account that the stricture was ever surgically treated, yet it ought to have been, for the use of "waxed bougies" for that purpose was already well known Possibly the self-will and obstinacy of the patient prevented their application

CANCER OF THE STOMACH

For several years Napoleon had a gradually increasing trouble of the stomach which he believed to be cancer, inherited from his father, who died of that disease Apparently it had no connection with the urinary trouble He ate a reasonable quantity at meals but swallowed it quickly, often finishing in fifteen minutes He usually took at each meal half a bottle of the weak French claret, called "vin ordinaire," which shows him to have been much more abstemious as to wine than was common among French and English gentlemen of his day He said he was unable to drink freely on account of the rebellion of his stomach

As his stomach disease progressed he began to vomit, and that symptom increased to the end He had also severe pains about the liver and adjacent regions His physician, Dr Antommarchi, at length called in Dr Arnott, an English naval surgeon, in consultation, and they attended him together until his death from the stomach trouble, about eight weeks later

Napoleon left directions that a post-mortem examination should be made by Dr Antommarchi and that none of the English surgeons should touch him, or if any help was necessary Dr Arnott alone should assist

The Governor humored the dead man's whim by allowing this absurd dictation to be carried out, but he ordered five army and navy surgeons to be present and make a report of the autopsy Three other English surgeons were also present

Dr Antommarchi did the dissections and the others looked on The examination was miserably defective, but the art of making autopsies was then in its infancy Perhaps this was done as well as might be expected at that day, especially as there was no expert pathologist on the island

The report of the English surgeons differs in some minor points from that of Antommarchi, but in the main they agree

The body was measured and found to be five feet two inches and four lines in length, English measure, Napoleon being a very short man His head was twenty inches and ten lines in circumference, presumably the occipito-frontal circumference, for the reports do not state where the line was applied Héreau in some way derived the impression that the tape was applied just above the ears, and not at the usual place, around the occipito-frontal circuit The latter would have given a little larger measure Whichever it was, the head was a rather small one, in spite of the fact that the pictures of the artists generally exaggerated it, and made it look large Perhaps the very small stature made the head seem relatively large

The brain was not examined

The body was corpulent, notwithstanding the weeks of severe vomiting The fat was an inch and a half thick along the abdominal incision, and the omentum was loaded with adipose tissue

The stomach was the main seat of disease, the roof of the organ, that is the lesser curvature, was occupied by a cancerous growth, which extended from near the cardiac orifice to within an inch of the pylorus, and was lobulated along its anterior and posterior borders

Antommarchi's report calls it "cancerous ulceration" The English report describes it as "a mass of cancerous disease or scirrhus portion advancing to cancer" The phrases are obscure, but agree in the main idea of cancer The two reports disagree in the extent of it, but I have followed Antommarchi, whose observation was evidently the more precise The left extremity of the stomach and nearly all its lower curvature were healthy The cancer at its right extremity had crept around the entire inside of the stomach in a ring form, and had created there a stricture, which must have been the cause of the persistent vomiting The pyloric end of the stomach for one inch was free from the malignant growth, but its upper surface was perforated by a circular ulcer through all the coats Apparently some leakage of the contents of the stomach had at some time taken place, but a local peritonitis had stopped the effusion by causing a firm adhesion of the roof of the stomach to the liver, and of the whole upper surface of the liver to the diaphragm Incisions into the hepatic tissue showed a perfectly natural color The spleen was enlarged The lymphatic glands near the borders of the stomach were enlarged The heart was natural, the pleura showed small spots of adhesion and contained a little fluid The lungs showed only trifling diseased signs

Microscopic diagnosis had no existence in those days, but the gross facts, though badly observed and badly reported, show that cancer of the stomach caused the death, while the rather extensive local peritonitis caused by the circular ulcer assisted to extinguish the life

The tropical climate and the ocean winds, so much blamed by Héreau for shortening Napoleon's life, left no characteristic traces in the respiratory organs nor in the other viscera They did not hasten by a single hour the great ex-emperor's death

2520 Prairie Avenue, Chicago

THE LOCATION OF THE APPENDICULAR ABSCESS

BY M L HARRIS, M D

PROFESSOR OF SURGERY CHICAGO POLICLINIC

That the appendix is extremely variable in its location, and that abscesses formed about it may occupy areas widely remote from the usually described appendicular region, are facts which the surgeon who has operated often in cases of appendicitis has frequently encountered Attempts have already been made, particularly by Gerster (New York *Medical Journal*, July, 1890) and v Sonnenberg (*Deutsch Zeitsch für Chir*, Bd xxxviii, Heft 2 u 3) to classify these abscesses according to location, accessibility, etc Gerster describes five types of these abscesses, classified according to the point where they come in immediate contact with the abdominal wall, and are accessible to the knife without traversing the free peritoneal cavity

1 *Ilio inguinal Type*—The abscess lying anterio, externally beneath the parietal layer

2 *Anterior Type*—Lying more internally, in direct contact with the anterior abdominal wall

3 *Posterior Type*—Lying in contact with the posterior peritoneal wall

4 *Rectal Type*—Accessible through the rectum

5 *Mesocœliac Type*—Lying in the midst of loops of small intestine not in contact with the abdominal wall at any point

v Sonnenberg (*Deutsch Zeitsch fur Chir*, Bd xxxviii, *Heft 2 u 3*) describes four types

1 *Antero—external*—The loops of small intestine which almost always lie between the lower end of the cecum and the anterior abdominal wall become agglutinated early As the amount of pus increases these are pressed aside and the pus reaches the parietal peritoneum which forms the anterior wall of the abscess, the cecum with loops of small intestine form the posterior and upper and inner wall, while the iliac fossa limits it externally The appendix in these abscesses is usually found in front in the iliac fossa, or along the outer and lower surfaces of the cecum

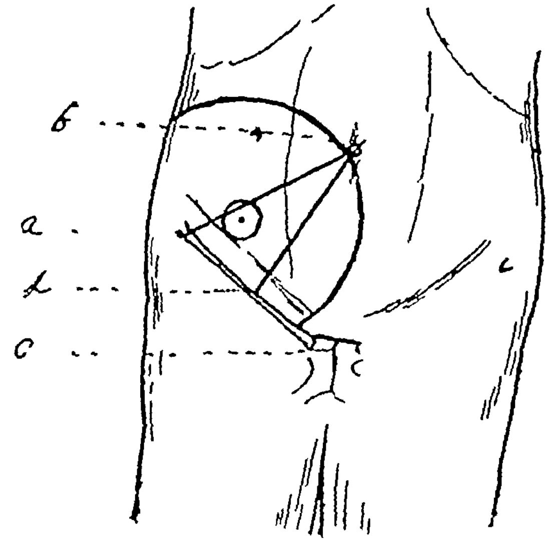

Fig 1—a ant sup spine of ilium b umbilicus c symphysis, d, Poupart's ligament

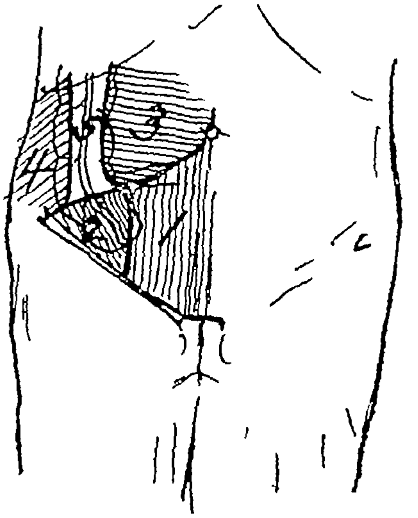

Figure 2.

2 *Posterior*—The abscess is limited in front by the cecum, and behind by the posterior abdominal wall

3 *Internal*—Abscess bounded externally by the cecum and colon, posteriorly by the mesocolon, and internally and below by adherent loops of small intestine

4 *Pelvic*—The abscess occupies the small pelvis, usually the right side or in the recto-vesical pouch in the male, or Douglas' cul-de-sac in the female

Without entering into particulars, it is sufficient to say these classifications are imperfect, some types which are quite common and possessing markedly distinctive features being omitted entirely and others imperfectly outlined Before considering in detail the various abscesses as they may appear about the diseased appendix, let us dwell for a moment on the location of the healthy organ A circle of an inch and a half in diameter—the size of a silver dollar—drawn about the center of the posterior surface of the cecum will touch the base or point of origin of the appendix in about 96 per cent of all cases It will thus be seen how constant is the location of the base of the appendix The average length of the adult appendix is 9 cms , or three and one-half inches A circle, then, of four-inch radius, drawn about the same center as our smaller circle will give us a very large area in the abdominal cavity, anywhere within which we may find the apex of the normal appendix located (Fig 1)

The appendix may radiate in any direction from its base or point of origin, although it is found to extend in certain directions much more frequently than in others

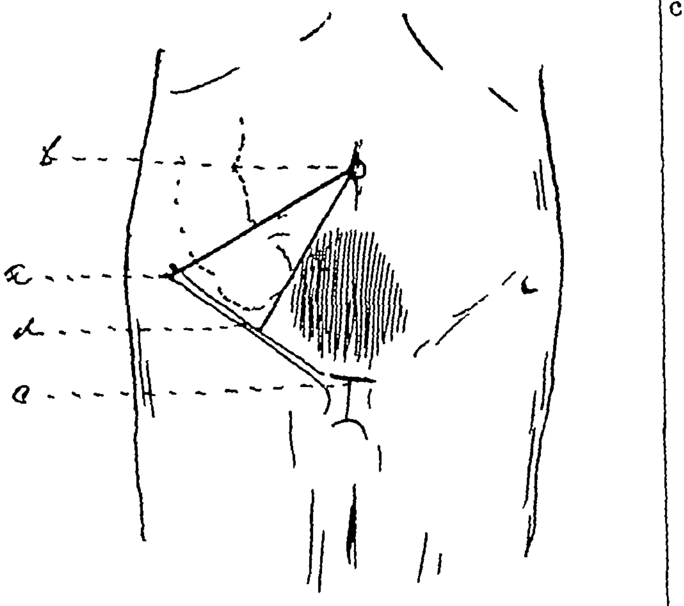

Fig 3 —Shaded part represents location of exudate or abscess as determined by physical signs All drawings are from actual cases

If we examine the anatomic relations within this large circle, we will find that the space may be subdivided into five separate areas, each having distinct and well-defined boundaries The appendix may be found in any one of these five areas, and when an abscess forms about the inflamed organ, it is the particular area in which the appendix is located which gives to the abscess or exudate its characteristic location and outline, which limits its extension in one direction and favors it in another, and which should guide us in the selection of the best point for incision and direct to some extent the technique of the operation

These areas, arranged according to the relative frequency with which the normal appendix is found to occupy them, may be thus outlined

1 *Area—infra mesenteric*—Is the space bounded above by the mesentery of the lower end of the ileum and externally by the inner and lower border of the cecum It is practically the southeast quadrant of the above described circle, and located within it we find the appendix in about 60 per cent of the cases The appendix may be superficially situated, approaching anteriorly or lie deeply on the posterior wall, it may extend directly inward, hugging the under surface of the mesentery at the ileum, or inward and downward, reaching often into the true pelvis The mesentery above prevents the extension of abscesses in an upward direction, but gives to them a tendency to extend downward and to the left

We may further subdivide abscesses in this area into three types (*a*) Those occupying the true pelvis, (*b*) in the midst of loops of small intestine (meso-celiac type of Gerster), (*c*) superficially situated near base of appendix (Internal type of Sonnenberg)

The pelvic abscesses are limited in the male anteriorly by the bladder, posteriorly by the rectum and pelvic wall and above by the sigmoid and loops of small intestine In the female they fill Douglas' cul-de-sac or occupy the ovarian region on one or both sides, where they are often with great difficulty differentiated from pelvic abscesses of tubal or ovarian origin The danger of infecting the general cavity on opening these abscesses from above is very great, and the advisability of draining through the vagina in the female, as in other septic pelvic troubles, comes into serious consideration

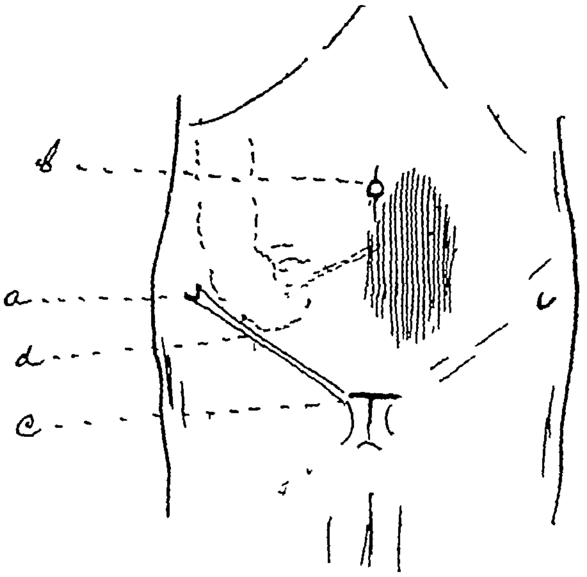

Figure 4

The inter-intestinal abscesses (Figs 3 and 4) are usually situated near the mid-line and are consequently best opened at this point Adhesions may have occurred to the anterior parietal layer so that the abscess may be opened without entering the general cavity, or there may be no adhesions whatever so that the free peritoneal cavity must be traversed in order to reach the abscess In the former case great care must be exercised in order not to open the bowel, and the greatest gentleness is necessary so as not to break down the protecting adhesions When no adhesions exist, the dangers of the case are greatly increased However well we may pack around with gauze, it is often impossible to prevent pus escaping into the general cavity, with a resulting fatal acute septic peritonitis It is in those cases that the advisability of doing a *deux temps* operation is to be considered. If the patient's condition will permit of the delay, pack with iodoform gauze for twenty-four or forty-eight hours until adhesions form, then open gently without disturbing them Should the appendix be found floating free in the abscess cavity it may be removed, but if it be firmly embedded in the exudate forming part of the abscess wall it should under no circumstances be torn out and removed, if by so doing we endanger breaking into the general cavity, thus leading to general sepsis

In the third subdivision the exudate usually comes to the surface, forming adhesions to the anterior abdominal wall, just internal to the cecum (Fig 5) The abscess is limited externally by the cecum and internally by the loop of ileum which almost always covers over the end of the cecum and the omentum They are usually best opened by a vertical incision over the inner border of the cecum Care should be taken not to separate the loop of intestine internally, particularly at its lower angle, as pus then escapes at once into the pelvis The appendix can nearly always be removed as it usually lies posteriorly or anteriorly, and it can be done without disturbing the internal wall of exudate which protects the general cavity

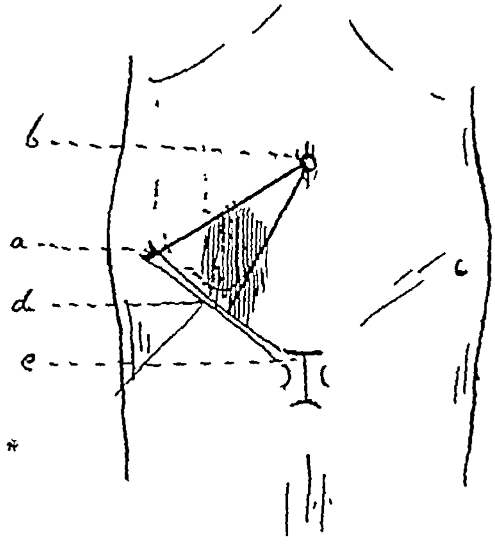

Figure 5

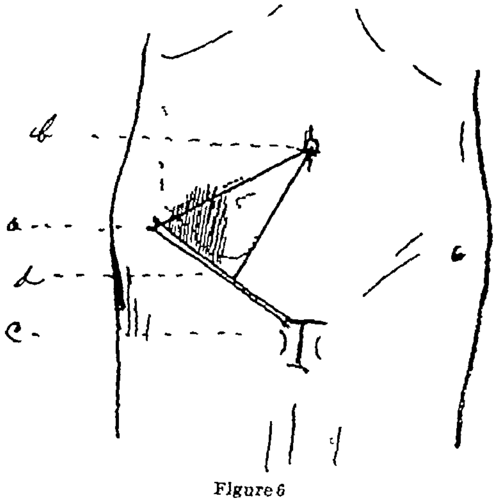

Figure 6

2 *Area—retro cecal*— Appendix lies in the little pouch posterior to the cecum, more or less curved or folded upon itself or extending downward and outward It is found here in about 23 per cent of the cases

Abscesses have the cecum in front, the same loops of small intestine internally, and the iliac fossa posteriorly and externally They come to the surface along the outer half of Poupart's ligament (Fig 6) They are best opened by an oblique incision parallel to the outer half of Poupart's ligament, coming down upon the outer border of the cecum, which should be raised up and turned inward The appendix can nearly always be removed, unless it should be too firmly imbedded in the exudate forming the inner wall

3 *Area—supra mesenteric*—The appendix lies above the mesentery of the ilium and internal to the inner layer of the meso colon (Fig 7) Abscesses are prevented from descending into the pelvis by the mesentery, they are limited externally by the meso colon and colon, and internally by agglutinated loops of small intestine They have a tendency to spread upward toward the liver, and have ruptured into the duodenum and the gall-bladder Adhesions to the anterior parietal peritoneum are the rule

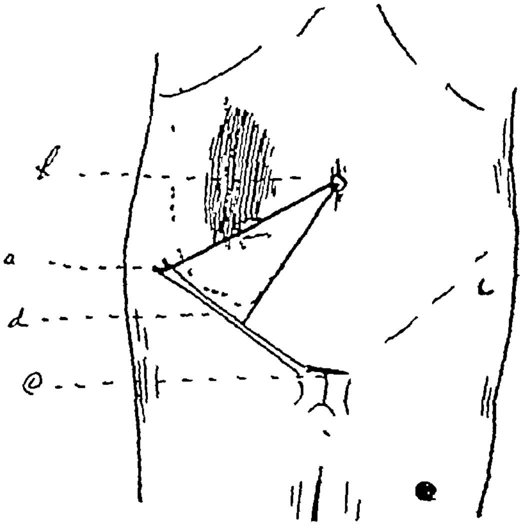

Figure 7

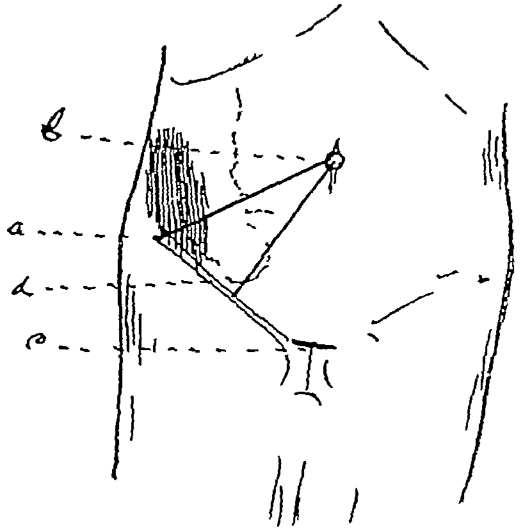

Figure 8.

These abscesses are best reached by an incision along the external border of the right rectus muscle, great care being taken not to break down the adhesions between the loops of small intestine to the inner side

4 *Area—external*—Is the space between the outer border of the colon with its outer layer of meso-colon, and the external abdominal wall The appendix may extend upward and outward into this space, its tip sometimes reaching nearly to the under surface of the liver

Abscesses here are quite characteristically defined (Fig 8), being limited internally by the meso colon and colon, which is usually adherent to the anterior abdominal wall, thus shutting off the general cavity, and externally by the parietal layer They spread upward to the liver, or even between the liver and diaphragm, and have repeatedly ruptured into the pleura and even the bronchi They may be reached by an oblique incision extending from above the crest of the ilium downward and inward, parallel to the outer third of Poupart's ligament, or, if the abscess is high up, by a longitudinal incision over its most prominent part, care being taken not to injure the ilio-hypogastric nerve The appendix can nearly always be removed, as there is no danger in separating the adhesions about it of opening the general cavity

5 *Area—retro colonic or extra-peritoneal* —In the cellular space posterior to the colon between the two layers of the meso-colon (Fig 9) Abscesses here are entirely extra-peritoneal The colon is pushed forward Pus may dissect upward about the kidney, producing a perinephritic abscess, or it may dissect downward beneath the iliac fascia and point below Poupart's ligament

The incision in these cases should be an oblique one, similar to the one described under the fourth area, but extending pretty well above the crest of the ilium

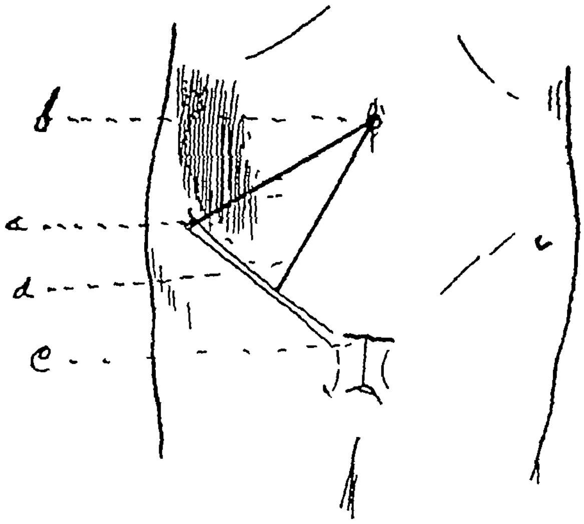

Figure 9

If it be determined beforehand that the appendix is retro-colonic, the peritoneum need not be opened, but when reached, dissected up posteriorly until the abscess and appendix are reached The appendix may be removed by this route without opening the peritoneum

If the peritoneum be opened before it is determined that the appendix is retro-peritoneal, the posterior edge of the peritoneum should be raised up and stitched to the anterior edge, when we proceed as if the peritoneum had not been opened

These five areas, having their distinct anatomic boundaries and relations, are what give to the abscesses their characteristic location, outline and direction of extension

The particular direction in which the appendix and abscess lie in each concrete case must be determined by accurately outlining the mass by inspection, palpation and percussion, and in no case should a careful rectal examination be omitted When the abscess is thus located, the best point for the incision becomes apparent and this should at all times, when possible, be made in a manner respecting the muscular layers and the direction of their fibers

THE VALUE OF PUPILLARY CHANGE IN SPINAL AND BRAIN DIAGNOSES

BY JAMES A LYDSTON, M D , Ph G
Ophthalmologist to St Joseph's Hospital Lecturer on Diseases of the Eye and Ear, Chicago College of Physicians and Surgeons Member of the American Medical Association Fellow of the Chicago Academy of Medicine and President of the Alumni Association of the Chicago College of Pharmacy
CHICAGO

The intimate relationship between the brain, the spinal cord and the eye, leads us to infer that the pathologic processes implicating the eye should enable us to diagnosticate various morbid processes primarily asserting thenselves in the spinal cord and brain And while we possess certain data more or less positive in their character, among which pupillary change is prominently figured, we are not always able to define positively by the disturbed pupillary reflex the site of such pathologic processes It seems, however, that an outline of the pupillary changes consequent upon spinal or brain lesion that are definite in character, should prove advantageous to the general practitioner as well as the ophthalmologist, consequently we will enumerate, as far as practicable, the diseases of the cord and brain with their accompanying pupillary changes which are conspicuously significant and explain their etiology Since the pupil is nothing more than a circular opening in the iris, it follows that this structure is an active participant in cases involving pupillary changes, and as the iris is intimately associated with the sympathetic, it is not strange that brain and spinal diseases should be associated with pupillary changes Thus spastic mydriasis is a condition which accompanies cerebral irritation arising from various causes, while a much more frequent type of mydriasis—paralytic mydriasis—due to paralysis of the oculo-motor fibers which innervate the intrinsic ocular muscles, namely, the ciliary muscle and sphincter pupillæ, which are usually both involved in oculo motor paralysis In this case the paralysis may be diffuse, that is, affecting several or all of the branches of the nerve or it may be isolated in character, implicating the pupil or in conjunction with the ciliary muscle Such paralysis occurs in syphilis, in chronic cerebral affections, or is toxic in origin Under the latter category we note the effects of the various mydriatics and those cases of absorbed products of putrefaction styled ptomaines, septicemia, etc

We have certain traumatic forms of accommodative paralysis, associated with pupillary dilatation, ascribable to local injury of the sphincter pupillæ and ciliary muscle In contused injuries, consequent on concussion, we frequently observe small lacerations accompanied by extravasations of bloody serum, etc , into the muscular structure, while increased tension causes paralysis by reason of pressure upon the sensitive nerve filaments, and, if unrelieved, atrophic changes eventually supervene Pupillary dilatation accompanying amaurosis is not dependent upon motor disturbances, but is rather a cessation of the physiologic pupillary reflex due to modified illumination

With respect to myosis, or contraction of the pupil, we note that spastic myosis, so called, occurs as one of the prodromal manifestations of meningitis, whereas, locally applied, the several myotic remedies of which eserin is the type, while pilocarpin ranks second, induce marked spastic myosis, while other poisons, such as chloral hydrate, opium, nicotin, stramonium, etc , likewise induce pupillary contraction And it is well to note here that paralytic miosis is a suggestive symptom of implication of the cervical sympathetic, paralytic in character, and is commonly noted in spinal lesion, especially tabes dorsalis And it is in this connection that the so called Argyll Robertson phenomenon finds its most fitting application, i e , the pupil fails to react to light, while it reacts synchronously with accommodation and convergence We must always remember that enlargement and contraction of the pupil do not perceptibly impair vision unless accompanied by accommodative paralysis To Horner belongs the credit of having first outlined the symptomatic phenomena characteristic of sympathetic paralysis, and he notes the following

1 Pupillary contraction due to paralysis of dilator fibers, which is determinable by shading the eye

2 Narrowing of the palpebral fissure as a result of drooping of the upper lid, which in turn is due to a paralysis of the smooth muscular fibers in this situation, called the musculus palpebralis superior of Muller, innervated by the sympathetic

3 The eyeball is perceptibly sunken and intraocular tension is lowered, while the fourth and most important sign is the notable fact of a variable fullness of the vessels on the two sides

Thus, in recent cases of paralysis, the face is flushed and warmer on the paralyzed side, while the contrary obtains in the later stages, the paralyzed side being cooler, blanched, and devoid of sweat, which is readily determined by inspecting the sweat-band of the patient in question

The underlying or predisposing causes of sympathetic paralysis are groupable as follows

1 Traumatism, such as accidental injury and operation wounds implicating the nerve in the neck, while central lesions are at the bottom of a percentage of cases Spinal cord lesions, e g , tabes and injury of the upper cervical portion of the cord, are likewise responsible in certain cases Since pupillary contraction is dependent upon the sympathetic, which receives its pupillary fibers from the ciliospinal center of the cervical spinal cord, it follows that irritation of this center or of the cervical sympathetic induces pupillary dilatation, and its paralysis or division pupillary contraction, while the same is true of the oculo-motor nerve, i e , stimulation of the oculo-motor nerve causes pupillary contraction, its section or paralysis pupillary dilatation, and inasmuch as pupillary reaction is either reflex or associated, and if it be reflex the necessary impulse emanates from centripetal nerve channels extending to the iritic nerves, and if associated arises from the pupillary fibers of the oculo-motor nerve which are agitated simultaneously with other oculo-motor nerve fibers, it follows that, excluding toxic influence of whatever cause, any abnormal pupillary change arises from pathologic conditions involving either the oculomotor nucleus or centripetal nerve centers, intimately associated with the iritic fibers

And since the nuclei of nerve fibers which act simultaneously, namely, the sphincter pupillæ, accommodative and convergence centers are closely related in the brain, being situated in the anterior extremity of the oculo-motor nucleus, it follows that any morbid process involving these centers will exhibit itself by abnormality of the pupillary reaction, combined possibly with disturbed activity (on part) of the extrinsic ocular muscles which preside over convergence, and in turn we can approximate the site of the pathologic process with comparative certainty by remembering the course of the fibers, emanating as they do from the oculo-motor nucleus, observing a downward course from the crus cerebri to the base of the brain, at which point they unite to form a single trunk opening at the anterior border of the pons varolii, extending thence through the cavernous sinus and superior orbital notch to the orbit Total abolition of the functions of the sphincter pupillæ, convergence and accommodation always signifying total destruction of both motor oculi nuclei or their ramifications The abducens and trochlear nerves which likewise are characterized by separate partial nuclei, after reaching the base of the brain, pass forward similarly to the oculo-motor nerve, extending through the cavernous sinus and superior orbital fissure into the orbit

Paralysis of a single ocular muscle with but one exception—ptosis, which sometimes occurs in cortical disease—always indicates that the site of disease is below the intracerebral tracts, that is, the cerebral cortex, association centers and their connecting fibers It is notable that in uremic amaurosis the pupillary reaction is intact, which points to the fact that the disturbance is located in the brain, i e , above the eye and optic nerve Atrophy of the optic nerve accompanying tabes frequently announces itself by pupillary change which asserts itself by the Argyll-Robertson phenomenon, in which the pupil still reacts to convergence and accommodation, but not to light, and is usually contracted, which, in conjunction with the test of Westphal, i e , the absence of the tendo-patellar reflex and its bilateral character, constitute diagnostic signs in the early stage of many cases of tabes

804 Champlain Building

THE IMPORTANCE OF EARLY DIAGNOSIS IN SOME FORMS OF NERVOUS DISEASE

Read in the Section on Neurology and Medical Jurisprudence at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY IRVING C ROSSE, A M , M D , F R G S
WASHINGTON D C

Only a few days since I was forcibly struck by the remark of one of my patients, now in the advanced stage of locomotor ataxia with progressive cortical changes, who tells me that on meeting his former physician he had refused his proffered hand, for the reason that he was one of several who for years had treated him for what they incorrectly took for rheumatism However questionable the act may be as regards politeness, there can be no doubt of its import to the patient when looked at from a diagnostic view-point Had the patient been treated by a skilled neurologist it is reasonable to infer that his condition would not be so lamentable as it is to day

I do not mention this incident in the way of fault-finding or unkind criticism of any one, but it seems hardly credible, in view of the numerous warnings from neurologists, that so many general practitioners who do not hesitate to recommend their patients to oculists, gynecologists or other specialists, should take a jump in the dark when a neurologic question is involved

Some years ago, one of my efforts was a paper presented to the American Neurological Association at Long Branch, in which I called attention to the frequency with which chronic, inflammatory and degenerative affections of the spinal cord are incorrectly diagnosticated and treated as rheumatism, even by practitioners otherwise well informed The observations therein mentioned, showing notable failure of diagnosis, consisted of cases examined for medicolegal reasons and each case was accompanied by more or less voluminous written testimony of physicians who have recorded such diagnoses as chronic rheumatism, rheumatism and heart disease, rheumatism and disease of the eyes, malarial poisoning, disease of the liver and spleen, sunstroke and resulting loss of sight, general prostration and debility, sciatica, and other vague pathologic generalities The certificates of disability were written by medical men from widely distant parts of the United States, and by surgeons of the Army and Navy Many of the patients in question have since died, and one having committed a criminal offense was, in my opinion, unjustly sentenced to penitentiary

Being a frequent occurrence in my own experience, my mind is filled with recollections of tabetic material where the attending physician has taken refuge in such a generality as malaria, or more commonly, the effects of grippe It is only necessary to relate a few examples by way of specification

A short time since I was called in consultation to see a young man who for several years had been actively treated for malaria Upon the advice of physicians he had taken much exercise, but growing worse, finally broke down on attempting to ride a bicycle I found the poor fellow in an advanced stage of locomotor ataxia, with gastric crises and trophic change of the stomach He lived but a short time

The second case was that of a United States Senator, whose wife was highly incensed at my diagnosis, although it was afterward confirmed by two of the best neurologist in New York During the last days of the Senator's illness he came under the care of a general practitioner who, to my surprise, tells me that he did not notice or examine for tabetic symptoms, and that the distinguished consultant he called in from Baltimore attributed most of the symptoms to the liver

In the third case, of a woman under the care of a general practitioner who had come to the end of his therapeutic tether, I found the patient with an alcoholic history, and in the last stage of sclerotic tabes On informing her husband of the hopeless character of the case, one of the numerous irregular practitioners who infest the National Capital was accordingly called in and proceeded to apply electricity, with which he claims to have cured twenty cases of locomotor ataxia A few days later, in looking over a newspaper I noticed the death of the patient

So far, indeed, has the notion of malaria been carried, that a few years ago a public man in Washington died of what was supposed to be malaria, contracted at the mouth of the Ganges river on a tour around the world, but which in reality turned out, at the necropsy to be cancer of the stomach

Occasionally, however, we find a man who has the scientific courage to say, "I don't know," and forthwith sends his patient to a neurologist, as was lately done in the case of a highly respectable woman suffering from paralysis of the extensor muscles of the left leg She attributed this condition to a sprain, but the extension of the paralysis to the opposite leg, and my familiarity with the patient's habits, led me to suspect alcoholic neuritis Under appropriate treatment she made a good recovery

In another case, of a young girl who had arrived at the age of puberty, but had never menstruated, I was called to witness what was supposed to be an obscure case of nervous disease of ovarian origin A slight strabismus with abdominal tenderness, and information from the attending nurse that the patient picked her nose and scratched her anus, exploded all notion of a "fancy" diagnosis and led to but one inference, namely, that of worms Suggesting this to my professional confrére, he relucantly wrote a prescription for an anthelmintic The morning following the administration of the medicine the intestinal parasite came away, the nervous symptoms rapidly disappeared and the patient made a good recovery

In connection with this subject I may mention the case of a small boy who was brought to me from one of the adjoining counties He had been under homeopathic treatment and had, on an average, ten epileptic seizures every day The symptoms indicated worms. After appropriate treatment he was two weeks without a manifestation of epilepsy, which entirely disappeared, and I have no knowledge of its recurrence

Quite different was the case of a comely young woman who consulted me several years ago for a variety of obscure nervous symptoms Something in her face suggesting an unhappy love affair, I asked if she was suffering from anything of the kind, to which she answered in a hesitating and evasive way that led me to suspect her truthfulness After some weeks of treatment she made but slow progress and I finally lost sight of her until a year afterward, when she came to my office and after much hesitancy and embarrassment told me that she had a confession to make, which was simply this An elderly woman, a so-called Christian scientist, had been using her for purposes of tribaism, and this woman had obtained such an influence over her as to break up many social and domestic relations, besides ruining her health As the woman had quitted Washington, my patient did not feel the restraining influence that formerly kept her from telling me this bit of personal history I saw nothing more of my patient for several months, when happening to be waiting for a train in a railway station in Paris, I saw her with her former old associate in crime, from whom she probably could not stay away I mention this case for the reason that one of the oldest practitioners in Washington remarked at the reading of a paper on sexual perversion, that he did not think the cases so common as I had reported, or he would have seen them This is one of many cases that have since come under observation or have been reported to me by other physicians

Much remains to be said on early diagnosis of that vast subject of epilepsy There is no disputing the fact that a small proportion of cases of this protean affection may yield to early and careful treatment I say protean in speaking of this terrible neurosis, for nothing could be more incongruous than the symptoms that go to make up a diagnosis in such apparently different attacks as that of epileptic vertigo, an attack of *grand mal*, or a manifestation of epileptiform mania

However much may be said upon the feasibility of early diagnosis of epilepsy by a person having the necessary technical requirements, its importance is a most serious matter in questions of forensic medicine, since the mistakes of a medical expert are more grave in their consequences than those of the ordinary practitioner

In the last year or two, in the District of Columbia, we have had sad examples of questionable legal proceedings in cases of aphasia, paranoia, and epilepsy, in which irresponsible individuals, exhibiting a morbid degradation of a suffering organism and morality in ruins, have become the victims of judicial predilection and the sentiment of the hour

The recent case of *Taylor*, an epileptic wife murderer, who also shot himself over the heart with suicidal intent, may be cited as a case in point In this case, hereditary predisposition and domestic chagrin were predominant features The father was a consumptive and the mother a paralytic, the significance of which is evident, if we accept recent statistics which show that in about 50 per cent of epileptics there is a family history of some nervous or pulmonary trouble Besides epilepsy the accused had a history of sunstroke, he had a scalp wound in the upper part of the frontal bone, and a depression from a horse-kick about the vertex of the skull, the pupils showed a want of responsiveness to light and accommodation, and ophthalmoscopic examination showed a choked disk The pulse was 130, sitting, he was neurasthenic and tremulous, had exaggeration of the reflexes, and insomnia Eroticism was another salient feature in the history, as the accused says that he missed copulation but thirty nights in five years Nymphomania seems also to have prevailed on the other side of the house

Viewing these facts and the proved infidelity of the wife, is it astonishing to any one, with even a small knowledge of psychiatry that the stress induced thereby should lead to impulsive and delirious acts of fury, such as suicidal and homicidal attempts, or even wife murder? At least ten instances of the latter crime committed by epileptics may be cited In fact, it may be said that no epileptic can be a kind and loving husband, because of egotism, suspicion, irascibility, and a tendency to violent and instantaneous impulses, and it is no temerity of language to say that some of the greatest crimes that have shocked human nature have been committed by epileptics It is not pretended that every epileptic is a candidate for insanity Nor is it denied that history furnishes instances of great epileptics, as Cæsar, Mahomet, Peter the Great, and Napoleon The alleged epilepsy of the last-named is, however, open to doubt If not digressing, I may say that having lately spent some time in France my attention has been called to evidence that inclines to the belief that the assertion is utterly without foundation

But, to come back to the case under consideration, in which I testified for the defense, the question of the prisoner's suicidal wound being brought in by the counsel, I was asked as to my experience in the collection of facts as to gunshot wounds, to which I answered that my experience was probably larger than that of any other man in the United States As this statement may seem strange in coming from a neurologist, I must specify the facts upon which it is based In addition to seeing numerous gunshot wounds in various military hospitals around Baltimore and Washington, during the Civil War, and in Europe after the Franco-Prussian campaign, I also handled, studied and described, thousands of specimens in the Army Medical Museum, where I was employed for several years as one of the collaborators of the surgical history of the war, and after that I examined for the Pension Office many thousand gunshot wounds of all kinds in applicants for invalid pension In stating to the court the result of my examination of the prisoner, I said "I came to the conclusion that he was a man of unsound mind and not sufficient master of his own actions to enable him to choose between right and wrong in the offense for which he stands indicted" The term "unsound mind," which appears to have caused the court considerable embarrassment, is herewith used advisedly, since it is used by the best medico legal writers and also appears in the newest legal authority, the "English and American Encyclopædia of Law" Dr William A Hammond and others testified substantially to the same thing as myself Yet an outsider hired by the government, whose chief qualification seems to be that he is an insane asylum superintendent in Pennsylvania, took the stand, and in testifying to the sanity of the accused, totally ignored the post-epileptic mental state and, among other amazing assertions, declared that there is no such thing as the clinical reality known as nocturnal epilepsy

Testimony of a similar nature was given in the case of *Beam*, who murdered his stepdaughter After about fifteen minutes' examination by the forementioned asylum superintendent, he was pronounced sane and handed over to the gallows, notwithstanding the fact that numerous lay witnesses swore to his insanity As this unfortunate man was too poor to employ medical experts in the way of rebuttal, I was asked, as a matter of charity, to examine into his sanity with a view to securing a new trial I learned from trustworthy sources that the father has been a senile dement for thirteen years in a public institution, and that the mother is a woman of irascible disposition, whose conduct has been erratic and suggestive of unsound mind The history of the accused showed the turbulent career of a paranoiac, who was influenced by such delusions of religiosity as reading sermons to cattle and to the dead in unfrequented graveyards, and in the still crazier notion of building a stairway to the moon, and of reforming all the prostitutes of Baltimore, one of whom he married by way of practical application

I found the prisoner of indifferent physical development with congenital deformity of the thorax, and syphilitic In addition to physiological signs of degeneration, the mental stigmata were marked There was not the slightest attempt at concealment or simulation, although the prisoner talked freely and somewhat incoherent He had a number of immovable delusions, one as regards a cat, another as to untold wealth in a gold mine he had discovered in Maryland, a third in regard to hypnotism, and a fourth as to poison, and there was a tendency to obsession

The main objection to granting a new trial on this case appears to hinge on the phrase "unsound mind," which though used advisedly in my affidavit seems to have a source of embarrassment to the court The term, "unsoundness of mind," employed by the latest and best authorities both in forensic medicine and law, is in fact of legal adoption and one that is preferred by lawyers to the term insanity, which they have come to look upon with suspicion

In the contested will case of Wallis vs Suhring, 134 Ind 447, in which unsoundness of mind and undue influence were alleged, the court instructed the jury adversely as to the term unsound mind, yet they found for the contestants, and on appeal the Supreme Court affirmed the judgment Seemingly imbued with the "wild-beast theory of insanity" and the residuum of by-gone legal superstition, which not so long ago considered it right to hang the innocent old witches of Salem, the court, in attempting to be its own insanity expert, utterly ignored the more advanced teaching of science Assuming these teachings to be true it is, therefore, not the perfection of reason to deny the meeting link between science and law, nor is it wise to reject their application to the purposes of justice

Something of the same spirit seems to have tinctured the mind of the bench in the case of the paranoiac, *Schneider*, some medico-legal details of which case I have recorded elsewhere[1] It is, however, only fair to the judges to say that they were largely influenced in this case by the unfortunate opinion of the medical experts employed by the government, who, in the light of subsequent events were shown to have been utterly mistaken

The foregoing cases furnish striking instances of the non-recognition and disregard of medical expert evidence by the average citizen, and, at the same time, stand in bold relief as judicial inconsistencies when contrasted with the *Sickles* case or that of the Treasury Department murderess, *Mary Harris*, who, a short time since, married her senior counsel In the District of Columbia, without a law to regulate the practice of medicine, charlatans and all sorts of mediocrities prevail to such an extent that the community at large show no discrimination between an educated medical man and a quack Consequently, in public estimation, the opinion of the so called doctor is just as good as that of the able and experienced In Germany, where the pig-headed and brass-handed rule of blood and iron comes down heavily, they manage such matters differently Owing to the civic spirit which pervades public and scientific men of that country, so much heed is given to medical intervention in matters of the kind under discussion, that of late we read of lust-murderers being declared insane, when we all know that such persons in the United States would not only meet with no mercy in court, but would, in all probability, become summary victims of a disorderly mob of lynchers

Many persons, however, say in reply that any consideration shown the defective individuals of whom we speak is harmful to society, and that, as a class, they are best disposed of after the manner of mad-dogs, which we do not hesitate to kill on the ground of public safety While such proceedings may obtain in American pioneer communities, a quarter of a century behind Europeans in realizing certain municipal and criminal problems, it is doubtful whether any argument can justify similar steps for the protection of society in these days of growing civilization and Christian enlightenment The horror inspired by crime calls for just indignation, but the pity felt for atavistic degradation and neurotic constitution of the insane, instead of being false sentimentality is in accord with the more enlightened civic ideas now rapidly spreading in our country

Aside from the personal responsibility affected by medical facts like the foregoing, the interpretation of many sensory, motor and trophic symptoms may bear upon questions of civil incapacity Moreover, other instances of questionable diagnoses come under the observation of the neurologist in which his work encroaches upon that of the surgeon Spasm or paralysis of the muscles are often erroneously named as causes of natural or structural defects, or mechanical injuries to the joints causing loss of motion, as witnessed in torticollis or in "angel-wing paralysis" Again, how many physicians overlook the apparently trivial and insidious prodromata of general paresis, the brain-fag, neurasthenia and polyuria of the overworked business man, and it may be asked, do ophthalmogists, as a rule, give due weight to the diagnostic importance of the condition of the eye-grounds in the matter of some chronic cerebro-spinal affections?

Although I have in this paper spoken of but a few nervous diseases, the idea I wish to convey relatively thereto applies forcibly to many other conditions What shall we say of the late diagnosis of appendicitis, cirrhosis of the liver, desquamative nephritis, and other medical and surgical affections where life may have been prolonged or saved by an early diagnosis? In fact, neurologic science can not be divorced from questions of diagnosis, so intimate are its relations with all other branches of practical medicine

My experience, in common with that of most neurologists, is that the diseases here mentioned are not recognized as early as they can and should be when due care is given to their semiosis In the matter of forensic medicine the questions in which diseases of this class are concerned are simply those of clinical diagnosis, and if we wish to help justice to make the best disposal of the irresponsible criminal, according to the more humanistic ideals of the present day, or if we expect to arrest or cure such dismal and discouraging cases as those afforded by the decay of the nerve elements, we shall never regret the attention and painstaking that enable us to make an early diagnosis

NOTES ON THE NATURE AND TREATMENT OF CHOREA BASED ON SEVENTY-FIVE CASES IN PRIVATE PRACTICE

Read in the Section on Neurology and Medical Jurisprudence at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore, Md , May 7-10, 1895

BY A D ROCKWELL, A M , M D
NEW YORK

If an apology is necessary for presenting for your consideration a subject so hackneyed as chorea, the nature of which so many able and careful observers have attempted to solve and about which discussion and theory have been worn threadbare, it is 1, that any disease, the source of so much anxiety and distress as chorea, can not be discussed too frequently 2, that my experience has been somewhat large and has been gleaned entirely in private and not in hospital practice, upon which nearly all considerations in regard to this subject are based, and 3, if I can not offer anything new in regard to medicinal or hygienic methods of treatment, I am in a position to speak with some authority and confidence upon the methods and results of electrical treatment, a subject even yet in its relation to this disease too little understood by the profession in general and almost altogether ignored by both teachers and writers on nervous diseases I have long desired to give the impressions of many years' experience in observing the course of chorea and treating its symptoms, and the invitation that I present before the Neurologic Section something pertaining both to neurology and electro therapeutics, affords me the opportunity that I have often wished for

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[1] See Virginia Medical Monthly, Feb , 1895, also JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Feb 2, 1895

Chorea has by common consent been put in that class of diseases that presents no constant detectable change in any of the structures of the body, and is therefore termed functional in character It is, however, more than doubtful whether a functional disturbance, however slight and evanescent, can exist without corresponding disturbances in the nutrition of the nerve elements Microscopic changes have, it is true, been occasionally found, but not with sufficient frequency to enable us to rely on morbid anatomy to account for the disease, and the nutritive changes that in all probability do take place are too subtle for detection and may perhaps ever remain conjectural Age and sex, in their relation to chorea, tell us far more of its nature than all methods of post-mortem examination

The fact that chorea is almost entirely confined to early childhood and youth and occurs with far greater frequency in girls than in boys—in the emotional period of life and mostly in the emotional sex—renders it probable that the disease is in the vast majority of instances purely functional, dependent upon disturbances or shock to the motor centers of the brain To illustrate I once had under my professional care a young girl suffering from what appeared to be a slight neuritis of the radial nerve On one occasion she was suddenly asked a question in regard to certain facts which she desired to conceal In her efforts to disguise any appearances of surprise her facial muscles immediately passed beyond her mental control, and for a few moments the localized movements exactly simulated the familiar examples of facial chorea It was an excellent example of temporary chorea, having its source in a temporary disturbance in the cerebral convolutions

Neurasthenia is a functional disease, and it may be either acute and temporary or chronic and permanent Just as the fatigue and irritability of mind and body that accompany profound and concentrated mental and physical effort are dissipated by rest and sleep, so the familiar examples of lost muscular control following sudden emotional influences, disappear on the subsidence of the cause In both cases we have to do with facts of cellular nutrition, in the one case with temporary exhaustion, in the other with temporary irritation

Intensify and prolong the processes of cell exhaustion and cell irritability and we get in the one case true neurasthenia and in the other true chorea Another reason for rejecting structural change as the causative factor of chorea, lies in the fact that so far as we have knowledge, there exists no structural changes of the nervous and muscular system that will in itself produce chorea Embolism to which it has been ascribed produces, so far as we know, symptoms of a far different character It is associated with head-pain, vertigo and nausea—at least at its outset—hemiplegia of varying degrees of severity, and when right-sided, with aphasia together with other disturbances of speech Then it must be remembered, how serious are its sequelæ, how apt it is to recur and to what extent nutrition is impaired The occasional presence of embolic particles found in fatal cases of chorea hardly offers sufficient basis for such a theory But that chorea must be regarded as a disease of the central nervous system, either primary or secondary to peripheral irritation can hardly be questioned As all movement, as well as all thought has its origin in the brain, it is inconceivable that disordered muscular movement such as characterizes chorea can depend upon peripheral influences alone In deference to our inability to point out objective pathologic changes, we sometimes speak of the psychic origin of chorea, yet in the last analysis we fall back on disturbance of the motor cortex

In a large proportion of choreic cases, especially among the poor, anemia exists, and in another large proportion of cases fright is the exciting cause Sometime ago a child was brought to me suffering from "nervousness" and extreme anemia I prescribed what seemed to be necessary and for a time saw no more of her While engaged on this article the mother again returned with the child, suffering now from an acute and violent attack of chorea, the exciting cause of which was fright These two elements of causation, fright, acting upon a nervous system weakened and irritable through its vitiated blood supply, seem to me to give great strength to the theory of malnutrition of the cortical ganglion cells as the seat and the efficient cause of chorea The analogy existing between certain nervous diseases that are attended by no definite and positive vasomotor changes are interesting and suggestive Influences, the same in kind that result in diabetes when acting on the nervous system of a man, result in hysteria when acting on the emotional nature of a woman, or in chorea when on the tender and susceptible nature of a child

Conflicting as are the opinions relating to the pathology and the treatment of chorea, there are certain facts in regard to the disease upon which all experience agrees Like Basedow's disease whose pathology is as doubtful as that of chorea, it occurs far more frequently in the female than in the male In my own experience, its exciting cause in the majority of cases can be traced directly to fright or other emotional causes, and in this again it bears some resemblance to Basedow's disease With increasing years the disease rapidly decreases in frequency and becomes far more intractable, and even dangerous to life

Notwithstanding my belief based upon these seventy-five closely observed cases, that the majority are in their essential nature central—although neither organic nor structural in the ordinary acceptation of these terms—yet a few have seemed to me to depend upon reflex influences, both as exciting and continuing causes Peripheral sensory irritants, such as a redundant prepuce with collection of smegma, intestinal worms and ocular defects have all within my own experience been the undoubted cause of chorea In the case of a redundant prepuce, an operation performed by Dr Charles McBurney, at my request, resulted in the prompt recovery of a case where the symptoms had been persistent for several months In a second case, where I finally suspected worms to be the cause of persistent choreic symptoms in a boy aged 8, a dose of santonin resulted in the expulsion of no less than ten of the common round worm, and all of considerable size This patient also promptly recovered In a third, a case of ocular defect, an operation by Dr Geo Stevens resulted in too prompt an alleviation of the symptoms to allow of any doubt as to its direct efficacy But reflex influences are altogether exceptional, according to my experience, in the production of chorea

Where the causes above enumerated exist once, in in connection with choreic symptoms, they occur a thousand times without any such connection It is the pseudo-choreas, the various habit-spasms that seem to be most benefited by correcting the anomalies of the ocular muscles and errors of refraction, and not the ordinary true chorea of childhood

Notwithstanding all the investigations of and the statistics offered by those who have written upon this subject, I have been unable to satisfy myself that between rheumatism or endocarditis and chorea, there exists any constantly direct relation as cause and effect The frequency with which a soft systolic murmur is found associated with chorea must be admitted, and also the results of post-mortems showing endocarditis and the presence of vegetations on the cardiac valves, but these relations have been analyzed with sufficient thoroughness to leave little doubt but that they are mostly accidental, even if in certain statistical tables they are found with suggestive frequency In epilepsy, in anemia, in the muscular relaxation associated with certain neurasthenic cases, we not infrequently detect a cardiac murmur, the same apparently as the ordinary choreic murmur While these murmurs may be and probably are due in many, it not most cases, to mitral regurgitation, yet they speedily disappear with no permanent structural harm The temporary defective action of the mitral valve is believed to be due to altered nutrition or innervation Certainly, the functional derangement of the action of the valvular apparatus is sufficiently evidenced by the readiness with which the murmur disappears as the disease improves

If rheumatism is the efficient cause of chorea through the action of its sequel, endocarditis, then it is hardly necessary to say that the endocarditis should precede the chorea On the contrary, it precedes it only in a small proportion of cases when they are associated, and in a large number of cases no evidence of endocarditis can be found As a reflex cause, endocarditis may occasionally be responsible for chorea, as are defects of the eye, or intestinal worms, or redundant prepuce, but, like these irritants, it may and does exist a thousand times without any relation to it whatever Most of the cases that have come under my observation have been carefully examined for evidences of heart disease, and in more than one-half of them there could be found no murmur of any kind and in only a very small proportion was there any history of aches or pains that could possibly be attributed to rheumatism

One of the strongest arguments against the rheumatic origin of chorea is the fact that, as related to boys, girls suffer from chorea in the ratio of three to one, while rheumatism affects boys far more frequently than girls Of the fifteen among my own cases of chorea that gave a history of rheumatism, ten were boys and only five girls These observations are very much in accord with those of Meyer[1], who, out of 121 cases, found that only 9 per cent had rheumatism, 13 per cent heart symptoms and 2 per cent the two combined, and with those of Leroux[2], who, out of eighty cases of chorea found only five clear cases of rheumatism and fourteen with heart complications Of these last, five were mitral lesions and nine simple anemic and extra cardiac souffles

Much stress is often laid upon the degree of disturbance of the mental function in chorea My observation of the disease as it occurs in children who are well cared for, both as to mind and body, is that there is seldom any mental defect Sometimes a young child will seem dull without really being so, and the parents and friends of the unfortunate little patient will act along this false hypothesis to the child's detriment In chorea, the muscular movements are not in harmony with the will The child, knowing herself unable to give correct expression to thought and desire, manifests, in the presence of strangers especially, a distrust and timidity not in accord with an acute mental state, while the operation and condition of the mind as registered in the facial expression is observed and misinterpreted because of the constant facial deformity The imperfect muscular coordination occasionally extends to the vocal apparatus, rendering the speech somewhat indistinct and jerky In other cases the patient talks very well when once started At first, the lips may be seen to move, but it is several seconds before there is any articulate sound One of the brightest children I ever knew had this symptom and, for a time, was credited with being below the normal level mentally There is a class of choreic cases very commonly met with, where the incoordination of movement is ordinarily slight, but when conscious of observation the muscular disturbance becomes exaggerated There is another class where a contrary condition exists The movements are greatest when the patient is at play and unconscious of observation, but by an effort of will the child can control these movements

It is among patients of the first class that mental defects are most often thought to exist, these cases are, however, far less apt to be dull than those of the second class, and recover with greater rapidity I do not find that ordinary chorea is distinctly or directly hereditary, but among the better classes, at least, it will be found that in an unusually large number of cases the child inherits a neurotic tendency This neuropathic heredity is said to be in the proportion of about one-sixth, but in my own experience it is much greater The theory advanced by Garrod that the rheumatic poison occasions a temporary overgrowth of connective tissue in the nerve centers, resulting in chorea, has little to recommend it, but the infectious theory about which so much has been said has points of strength both from an anatomic and a bacteriologic standpoint, since there is found in the nervous system a special bacillus pathogenic for microbes Bacteriologic and experimental researches have been made by Pianese[3] in fifteen acute cases of chorea In three of these cases a bacillus was isolated from the blood, and inoculation caused the appearance of the disease in dogs In the opinion of this author, the theory of the infectious origin of chorea is far more satisfactory and complete than all other theories Triboulet[4] has reported three cases of secondary infection by the staphylococcus in chorea, and gives it as his opinion that, in four fifths of the cases infection could be traced as the causative factor of the nervous trouble [5]

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[1] Berliner Klinische Wochenschrift, July 4, 1890

[2] Revue Mensuelle des Maladies de l'enfance, Paris, June, 1890

[3] Reforma Medica Naples, July 20, 1894

[4] Revue Mensuelle des Maladies de l'enfance, Paris, Dec 1891

But however suggestive the various theories and investigations as to the nature of chorea, nothing is more certain than that no constant pathologic change is associated with it, and we must fall back upon the theory of its neurotic functional origin Its almost benign nature and tendency to recover is the strongest evidence that it can depend upon no serious or persistent pathologic change

As regards the therapeutics of chorea there is much to be said, both from the standpoint of those who believe in the necessity and efficacy of therapeutic measures and from that of others who look upon it as practically a self limited disease which recovers as readily without as with treatment Self limited it is not, in the sense that we speak of the self limitation of scarlet fever or measles

We can not abort or very much, if at all, cut short the course of these diseases but that measures can be adopted for the relief of associated symptoms or the arrest of complications is admitted We can, however, not only very markedly alleviate the severity of choreic disturbances in aggravated cases, but can do what can not be done in the so called self-limited diseases—shorten the duration of the disease In regard to certain hygienic and sanitary methods of dealing with chorea there is very little diversity of opinion It is agreed that rest is a most important factor in most cases, and in those more serious the rest should be complete and continuous In several of these severer cases, where arms and legs and facial muscles are in constant motion, I have noted marked alleviation of the symptoms follow prolonged rest in bed

In the less severe cases, moderate exercise in the open air is allowable and beneficial, but in no case should a child with chorea be allowed to engage in rough and tumble sports Sleep, and much of it, is essential, and when it is greatly disturbed we are justified in aiding it by hypnotic measures The food should be nourishing but simple If the appetite be poor, it is allowable and even desirable to tempt it by daintily prepared food of judicious selection, but to attempt to stimulate appetite by artificial means is even more unjustifiable in the case of a child than in that of an adult Far more harm than good is done by forcing food, when nature cries out against it

The reflex effects of ether spray to the spine, or better still perhaps, of the chlorid of ethyl has been highly recommended and my own personal experience with it has, on the whole, been favorable While in some cases it may appear to do no good it can certainly do no harm, and occasionally I have seen unmistakable benefit follow its use

To enumerate all the internal remedies that have from time to time been advocated almost as specifics in the treatment of this disease, would only serve to indicate the limited data of experience upon which opinions are based Few of them have stood the test of time and trial, and the general opinion is that medicinal treatment is extremely unsatisfactory By this, I do not mean to say that in individual cases we may not be reasonably sure of the efficacy of certain remedies in alleviating symptoms and shortening the duration of the disease There are, indeed, well authenticated cases of long duration that have persistently resisted various accredited methods of treatment, and finally recovered promptly upon the adoption of some other old or some new and untried remedy

A notable illustration of this is related in Reynold's "System of Medicine," where a distressing choreic affection of the muscles of the neck had existed for nine years, defying all measures for its relief Hypodermic injections of arsenic were attempted with almost immediate relief and final recovery But I would say that there is no consensus of opinion as to which of the many drugs used is the most effective Arsenic has undoubtedly the preference, but proves too often absolutely inert There can be no question, for example, of the authenticity of the case just alluded to, and, encouraged by the success in that instance, I thought to duplicate in an obstinate case somewhat similar in character, by the same method of treatment, but without the slightest result

Now, although I have from time to time tested nearly all the well recognized remedies in the treatment of chorea, yet there is one remedy that I have used with more or less persistency in almost every case, and that is electricity I am not so credulous as to suppose it to be curative or even markedly beneficial in every case Occasionally, on the contrary, it has seemed to be contra-indicated, although long experience inclines me to the belief that this seeming susceptibility to the current is due more to a failure to correctly differentiate in the selection of the kind of electricity used than to any adverse idiosyncrasy present

In the light of my own personal experience in the treatment of chorea, the opinion expressed more than a quarter of a century ago by a distinguished physician is of much interest "Electricity," he says, "is another agent which requires a passing mention in this place, though all that can be said respecting it is, that as yet there appears to be little or no reason for placing any confidence in it as a means of treatment Whether this will always be the case, whether there are not modes of using electricity which will have the effect of quieting choreic and analogous movements, remains to be seen I suspect that there are such modes, and that they will be beneficial, but I have not yet the facts to justify the expression of a belief on the subject" [6]

Electricity benefits chorea on the same principle that it benefits neurasthenia or hysteria and many other functional nervous diseases, because of that indirect improvement in nervous force which is a part and a result of the general improvement of nutrition While electricity is neither life nor nerve force, it aids in sustaining both life and nerve force as do light and heat, not by direct transformation, but indirectly through its influence over nutrition This influence over nutrition, together with musculo-sedative effects, are brought about in greater or less degree by various methods of electrization, by general faradization, especially with the high tension coil, central galvanization, static electrification and even by peripheral galvanization To obtain temporary musculo sedative effects, there is no method that equals the depolarizing method of central and peripheral galvanization, by which is meant the elimination of either one or the other pole In this way the neutral point is thrown outside the body, and the part or parts brought under the influence of either the negative or positive pole alone as desired Static electricity (positive) is also sometimes useful in chorea in calming nervous excitement and as an aid to nutrition

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[5] These de la Faculte de Paris

[6] C B Radcliff M D F R C P On Chorea 1868

But the two methods that I have found, on the whole, to be the most effective in the treatment of chorea are central galvanization and general faradization These two methods properly differentiated and used either alone or in alternation, according to the indications in each individual case, are capable of doing much, not only in alleviating the violence of the choreic movements, but in shortening the duration of the disease

A somewhat useful point in the way of differential indication for the use of the two currents and the two methods of application, which has been forced upon me by repeated observation, is the following For children of full habits and in that excellent condition of general health which we not infrequently see among the victims of chorea, the galvanic current is to be preferred For those, on the contrary, who are weak and anemic, with impaired nutrition, the faradic current is far more grateful, and is followed by better results, both immediate and permanent

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EPILEPSY CURED BY TENOTOMY OF THE OCULAR MUSCLES

Read in the Section on Neurology and Medical Jurisprudence at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore, Md , May 7-10 1895

BY WALTER B JOHNSON, M D

PATERSON, N J

J H H , 23 years old, consulted the writer on Sept 5, 1889, stating that he suffered from a very peculiar form of disease of the nervous system for which he had been examined and treated during the past two years by a large number of prominent physicians He was in good physical condition, attended to his business as a salesman regularly, and had no discomfort, except slight headache, until the attacks for which he wished treatment came on, two years ago , since that time, at intervals varying from two weeks to two months, he had had attacks, the onset of which was a violent headache coming on suddenly and without any premonition and followed by loss of all conscious mental action The patient had no recollection, when recovering from the attack, of anything except the intial headache The time during which he remained in the state of conscious mental inactivity varied from two to five days , during this time he would, if the attack seized him on the street, have been able to care for himself as in such cases he invariably had sufficient money remaining to indicate the expenditure of enough only to have paid expenses during the time which was a blank to him On returning to conscious mental activity he generally, upon awaking in the morning, found himself in some hotel in the city which he had not been accustomed to frequent If the attack seized him at home the improvement in the headache, which occurred generally in two or three hours, was followed by a profound sleep which lasted until the following day, or in extreme cases, two days, the headache frequently returning on the morning of the second day When the stupor passed away he was able to resume his work as usual

The physicians consulted by him differed in opinion regarding the nature of the attack, Dr A L Loomis and the major portion diagnosing the disease epilepsy, while others considered it neurotic and only epileptiform in character

Upon the recommendation of his physician, he concluded to consult further with a view to excluding any abnormal ocular condition as an etiologic factor in the production of his disorder He applied for treatment in September, 1889 The case was of such marked interest that a consultation was considered advisable, and the several consultants reported the details of their examinations as follows

Dr Herman Knapp, New York Slight dynamic inversion not verified with prisms for near

Dr David Webster, New York R , 25 D C ax 90°, esophoria 2° in acc L , 25 D sph ; exophoria 20° , abduction 5° Under atropin, R , 50 D C ax 90° c, 0 50 D c ax 180° L , 0 25 D sph

Dr Geo T Stevens, New York, before and after atropin R , 0 75 D C ax 180, esophoria, 5° L , 0 75 D C ax 180, abduction 2°, later 0°

Homonymous diplopia The result of the examination of the writer was : R V , 20-30 — 20-15 1 D c ax 180 L V , 20-15 — 20-15 w 0 75 D sph

With this correction, the lines upon the test chart for astigmatism were all of an equal density and thickness, the vision normal Esophoria 5° , abduction 5°

Homonymous diplopia at distance The diplopia was not present at the near point, either with or without the correcting glasses, which were ordered and the patient directed to wear them continuously R , 1 D C ax 180 L , 0 75 sph

For some time after the glasses were prescribed and worn the patient was decidedly improved, his general condition was much better and he had none of the attacks previously described Finally, the primary effect of the glasses passed away and the epileptic seizures returned with as much frequency and force as previously existed The partial tenotomy of the internal recti muscles advised by Dr Geo T Stevens was then performed The eyes were tested immediately after the tenotomy and showed a slight degree of exophoria The patient was directed to wear his glasses continuously and report He remained in the city for two months, during which time there was no return of the attacks herein described , although he at times suffered from headache, he had none resembling those which occurred at the onset of an epileptic seizure, nor any stupor or loss of conscious mental activity following

April 23, 1895 In a letter written from his present home in Chicago, he states that he never has had any attacks of epilepsy since the last record, and is a different person from the one I knew in this city

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A RETROSPECTIVE VIEW OF THE TREATMENT OF HEMORRHOIDS

BY N H HENDERSON, M D

SURGEON LAKESIDE HOSPITAL CHICAGO

It is only within the past few years that diseases of the rectum have received the attention to which they are entitled Until about twenty years ago the only possible source of relief from hemorrhoids was the clamp and cautery or the ligature To attempt any surgical operation was considered very dangerous, and, in fact, we have evidence of many cases where fatal hemorrhage was the result of surgical procedure Surgeons approached the field with timidity, and during our college course instruction pertaining to diseases of the rectum were the exception, and not rule, and were mainly confined to prescriptions for some palliative ointment, with no assurance, nor even expectation of cure It is an acknowledged fact that the first step forward in the treatment of hemorrhoids was the hypodermic injection of carbolic acid, or any styptic that we saw fit to employ The regular practitioner was slow to accept this innovation, owing to its origin in the hands of the itinerant, but the success of the measure at length compelled the recognition of the profession For at least eighteen years my associate, Dr E H Dorland, has treated hemorrhoids by the method of injection and continues the practice in suitable cases up to the present date The next step toward reformation was the Whitehead operation Then Dr E H Pratt reversed the "Whitehead" and gave it prominence under the name of the "American" To recapitulate, we have the clamp and cautery, the ligature, the Whitehead and the American, to which I wish to add the operation described by me in the Journal of the American Medical Association of Feb 23, 1895 A brief notice of the above operations may at least enable the inexperienced operator to decide which he wishes to employ The clamp and cautery are entirely unsatisfactory, because you can not make a complete section of the diseased area, consequently it is but a few months, or years at best, until your patient returns to you suffering with hemorrhoids and the operation must be repeated Some patients will submit to the ligature, but if for no other reason than that the ligature is unscientific, unsurgical, uncleanly and one of the greatest sources of infection possible in this class of work, we are not, nor have we ever been, justified in using, but the results for permanency (if the patient survives) are better than those of the clamp and cautery The hypodermic injection is a vastly more satisfactory procedure, I have employed it hundreds of times, and in a certain class of cases I seldom fail to obtain the most gratifying results A recent investigation of cases treated in this way by Dr Dorland and myself, covering a period of eighteen years, demonstrates that of 1,800 cases treated by injection of a styptic, only about 15 per cent have suffered any return of the trouble As for the Whitehead and American operations, to mutilate unnecessarily any part of the human anatomy is something to be regretted, if not by the physician, at least by the patient In dissecting off the pile-bearing inch together with the integument at the verge of the anus, laying bare the sphincter ani, dragging down the loosened bowel and stitching it to the integument, we bury all the delicate nerve fibers that impart sensation to the sphincter beneath the bowel, which, being out of its normal location, can not and will not replace the original tissues Those having been submitted to these operations, have, I say without exception, a clumsy rectum, nearly devoid of sensation In cases where union between bowel and skin is complete there is a band of cicatricial tissue, which feels to the touch like a wire ring, and which completely encircles the anus and sadly interferes with the functions of the sphincter Again, we meet with cases where, having encroached too freely upon the integument, the operator has dragged the bowel down and out to repair the loss, to the end that the patient goes through life with his clothing rubbing against a portion of his anatomy which nature never designed to be so exposed But I must repeat that the greatest and most serious objection to these operations is burying the terminal nerve fibers of the sphincter beneath a part of the bowel which is almost devoid of sensation I am speaking from personal experience, having employed all of the methods mentioned, and I am not moved to these remarks by a personal motive alone, but hope that I have been able to recommend something better What I should recommend as an ideal treatment for hemorrhoids is hypodermic injection, where the patient can not go to a hospital, but where hospital care is not out of the question, I would advise the operation described in the above-mentioned journal I have made this operation no less than eighty-seven times, and in no case have I been disappointed in the result, either from stricture or loss of sensation, nor have I failed to obtain a complete restoration of the normal mucous membrane In three of the cases I failed to get the posterior incision (which was original with Dr Dorland) quite deep enough, the result of which was rather more contraction than I anticipated, but not sufficient to materially interfere with the normal function of the sphincter

NEW INSTRUMENTS

INSTRUMENT CASE, STERILIZER, SPONGE BASINS AND TRAYS COMBINED

BY E C DUDLEY, M D
PROFESSOR OF GYNECOLOGY NORTHWESTERN UNIVERSITY MEDICAL SCHOOL GYNECOLOGIST TO ST LUKE'S HOSPITAL,
CHICAGO

The apparatus herein described is designed to lighten the burden and add to the safety of surgical work in private houses, especially in the country From an experience of about two years in its use, the author offers it with confidence in place of the septic instrument bags, the unwieldy sterilizer and the cumbersome trays and sponge basins which make up the usual *impedimenta* of surgical practice outside of hospitals The apparatus fulfills the requirements, first, of an aseptic instrument case, second, of a steam sterilizer, third, of instrument trays and sponge basins It consists of two rectangular sterilizers made of copper, nickel plated, in which may be packed all instruments and other appliances requisite for an abdominal section, or for any other ordinary surgical operation Its component parts may further be used separately as pans, sponge basins and trays The whole outfit, inclosed in a washable canvas cover, is 16 inches long, 9 inches wide, 12 inches high, and when packed ready for an operation weighs about 25 pounds (See Fig 1) This canvas-covered instrument case contains a complete set of instruments, towels, sponges, ligatures, sutures, dressings, aprons, nail-brushes, soap, ether, chloroform, alcohol, antiseptic drugs, rubber sheet, douche bag, etc The equipment is adapted for work anywhere It especially solves the problem of septic surgery outside of hospitals, whether at the house of the prince or of the pauper

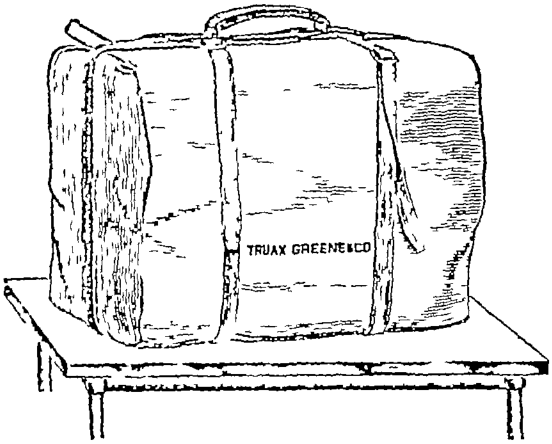

FIGURE 1

Fig 2 represents the two rectangular copper boxes as they appear under steam when used as sterilizers Observe that each sterilizer is supplied with four legs, which may be folded against the sides of the box when the box is not in use as a sterilizer Each box contains two gauze-wire trays, as shown through the broken side of the sterilizer in the right hand cut of Fig 2 The lower tray is one inch above the bottom of the sterilizer and contains instruments The upper tray, resting upon the lower, contains towels, dressings, ligatures, etc The space of one inch between the bottom of the lower tray and the bottom of the sterilizer that is below line A B, Fig 2, is filled with sterilized water The small trays D and G are filled with burning alcohol These trays are set upon saucers to prevent burning the table top The burning alcohol converts the water into steam, which sterilizes the contents of the wire-gauze trays One of the two detachable handles resting on the table between the two trays may be used to put out the flame by lifting the small alcohol tray in contact with the bottom of the sterilizer These detachable handles are also designed for use in separating the different parts of the sterilizers after the sterilization is complete

towels, gauze sponges, dressings, etc , which have been sterilized in them The two small, square, shallow cups which contained the alcohol now become trays for needles, ligatures and other small appliances (See Fig 3, H and G) Observe that this sterilizer is quite as well adapted for sterilization by boiling water as by steam After the apparatus has been under steam for thirty minutes, especially if this process has been repeated three times on consecutive days, not only its contents, but also its various parts which are to be used as sponge basins and trays are

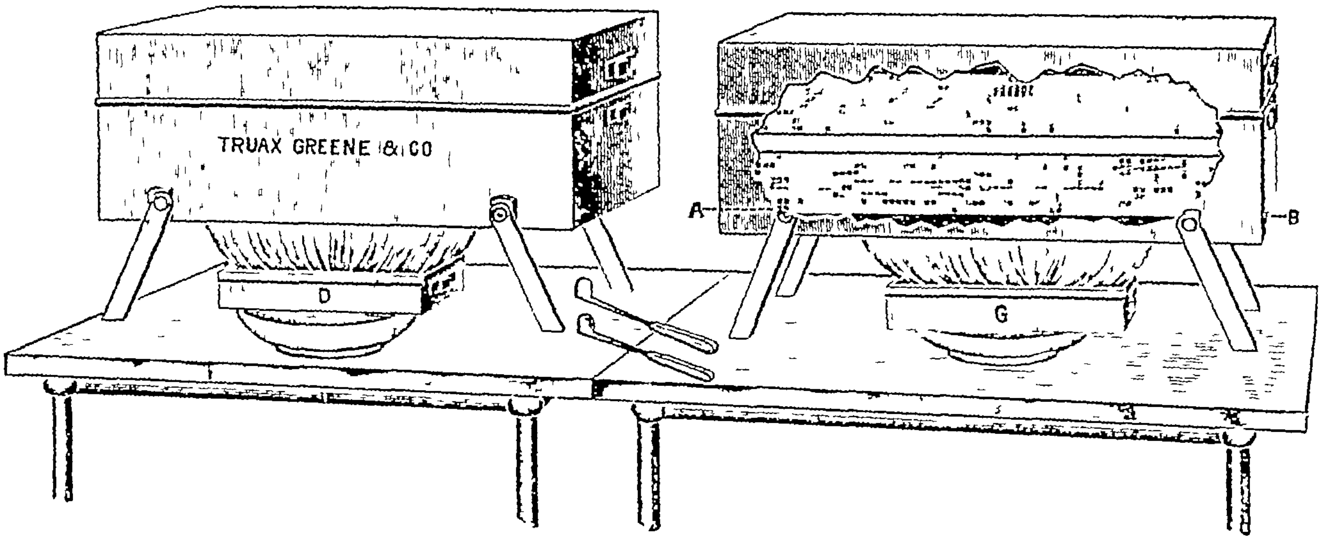

Figure 2

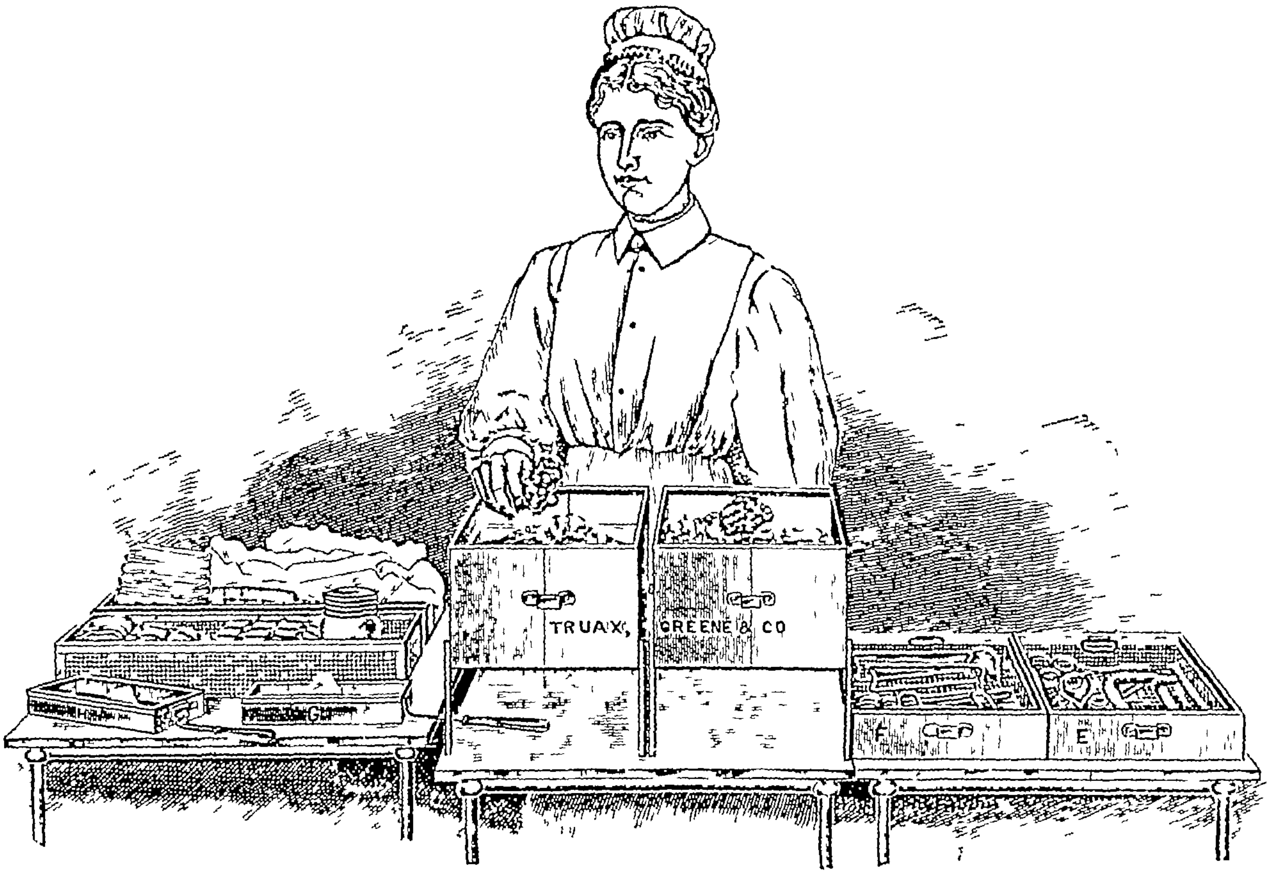

Figure 3

Finally, the several parts of this apparatus may be broken up into sponge basins, pans and trays The two large copper boxes become sponge basins The two top covers become trays, holding sterilized water, inside of which the two gauze-wire trays containing the instruments are placed (See Fig 3, F and E)

These gauze trays may be lifted out and placed in the covers without handling the sterilized instruments before the operation The other two gauze trays to the left of the sponge basin (Fig 3) hold the thoroughly sterilized Each member of the apparatus is supplied with one or more slots or rings, into which fit the detachable metallic handles already mentioned These handles are useful to separate the sterilizer into its several parts while hot, and to avoid unnecessary handling After an operation, even upon a septic case, all the parts of the apparatus may be washed and then sterilized by boiling in a large washboiler The boiling water should contain 2 per cent of carbonate of soda

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SATURDAY, DECEMBER 21, 1895

THE RE ASSEMBLING OF SCHOOLS

The health authorities of our Northern cities where diphtheria is prevalent could do a great deal of good by causing an examination to be made of the throats of children in the public schools at the opening session after the holidays

Children found with commencing sore throats should be returned to their homes to be placed under the care and surveillance of a physician, and thus one of the great causes of the propagation of diphtheria removed

It is well known that during the holiday season many of the ordinary restraints are removed, and household isolation of the sick is but imperfectly maintained The examination suggested would not only detect suspects, but cases of actually advanced disease when found might have the exudate examined twenty-four hours earlier than would be the case where the usual custom prevails of waiting until the general and local symptoms were fully developed

If we are ever to stamp out diphtheria, it must be by preventive measures of the sort indicated, not by reliance on curative therapeutics The alleged brilliant results of serum-therapy should not blind the eyes of the people or the profession to the greater triumphs of applied hygiene

DR HAROLD C ERNST says [1]

"The disease was at its highest at the beginning of the systematic use of the bacteriologic diagnosis and inspection of schools in December, 1894 From that time, month by month, there was a steady fall, sharper than occurred in previous years, until the slight rise that apparently always appears in May, just before the schools are closed for the summer

"Of the inspection of schools it may be said, that it has happened more than once that a child has been sent home for a slight sore throat, and that cultures have shown the presence of virulent bacilli from one to three days before the clinical diagnosis of diphtheria was in any way justifiable "

We do not concur, however, with DR ERNST s further view that this state of facts renders " cultural diagnosis " more advisable as a matter of routine On the contrary, the direct attack on the bacillus, as recommended by LENNOX BROWNE, would seem in every way safer and much more effective

However, whether one worships the new-born serum therapy , views it with skepticism, or even with distrust, there can be but one opinion as to the propriety of prevention of the disease by means of frequently repeated medical inspection of the schools, early diagnosis and prompt treatment

Let the School Boards and the health officers harmoniously proceed in this work, and not only will the closing of schools be prevented, but the disease itself be circumscribed in its devastations, if not in time absolutely stamped out

THE EVOLUTION OF OUR KNOWLEDGE OF TYPHOID FEVER

Before the discovery of the pathogenic microbe, typhoid fever, called also dothinenteritis (Trousseau), continued fever, etc , was characterized Anatomically, by specific lesions in the small intestine, especially in PEYER's patches, with concomitant changes in the mesenteric glands and the spleen , clinically, by continued fever of a definite type, by intestinal and nervous symptoms, by splenic tumefaction and a discrete eruption of lenticular rose-colored spots [1]

It seems very probable that this disease was known to the older authors, but it is very difficult when studying the epidemics of the time to clearly distinguish it amidst the chaos of pyrexias belonging to typhoid, to typhus and to malaria This confusion lasted for a long time and the writings of FRACASTOR, BAILLOU, SPIGELIUS, SYDENHAM and WILLIS give but vague and unsatisfactory allusions

In 1739 HUXHAM, in describing a disease which he called " slow nervous fever" gave the first clinical differentiation of the disease Very soon the epidemics of Lausanne (1754–5) and of Gottingen (1760–1) furnished the opportunity for new observations, and the descriptions of BORSIERI (1785) and of STOLL became more and more precise About this time the pyretologists, with their innumerable divisions, observed the question temporarily For instance, the symptomatic classification adopted by

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[1] Medical Communications of the Massachusetts Medical Society Vol XVI No III 1895 p 720

[1] Legry, L Union Medicale 1895, No 87

PINEL (1798) in his "Nosographie des Fievres Essentielles," obliges one to hunt through four or five chapters to find a complete account of the disease

However, pathologic anatomy threw fresh light on the subject, and PROST (1802) and PETIT and SERRES described the intestinal lesions in different stages of the disease in detail These authors were soon followed by CRUVEILHIER, ANDRAL and BRETONNEAU Thus material was accumulating both from clinical observations and anatomic findings to establish the autonomy of typhoid fever and mark its place in nosology

In 1829 LOUIS[2] gave a full account of the symptoms and morbid anatomy of the disease under consideration, and gave it the name of "fièvre typhoide," which was adopted shortly after by CHOMEL and is now classic The natural history of this disease being fixed by narrow boundaries, the malady was defined by its symptomatology and by its anatomic lesions The physicians of the time were free to occupy themselves with questions of pathogeny and etiology with great profit to its therapeutics and prophylaxis Let us see the changes of opinion before the question of etiology was fixed on its present firm basis

The first important theory concerning etiology was that of contagion Affirmed by LEURET (1828), BRETONEAU (1829), GENDRON (1834), it nevertheless had numerous opponents, and CHOMEL, ANDRAL and LOUIS, after long discussions on the subject, rejected it completely In 1849, though, the memoirs of PIEDVACHE furnished proof positive of the contagious nature of the disease

The discrepancies between the various authors may be explained by the different conditions experienced by the observers For instance, this phase of the question is nearly impossible to discover in large cities, while in small places it is very much in evidence Thus FORGET says "I have denied the possibility of contagion until a stay in the country has shown me beyond question that typhoid fever may affect persons living near the patients"

The possibility of contagion alone did not seem to solve the question entirely, for many practitioners, while admitting contagion, noticed facts which led them to believe we might also have an autochthonous spontaneous origin of the fever The pythogenic theory of MURCHISON (1858) is the most positive expression of this view According to this author the infectious material may come from any putrefying animal matter whatever "The disease may arise independently of any former case by fermentation of fecal matters, and perhaps in fermentation of other organic matters"

BUDD, on the contrary, a champion of the specific nature of this disease, maintained (1856–73) that every case of typhoid fever is the product of some former case A forerunner of later-day bacteriologists, he claimed that the morbid principle was eliminated with the diarrheal discharges, which disseminated the contagion to a distance and impregnated the soil Its diffusion is such, he said, that one patient may infect an entire town if the dejecta get into the wells He also showed that transmissions may occur through the air

PETTENKOFER's famous theory on the oscillations of the ground water (1854 5), which was so much in vogue in Germany at one time, does not seem to make much use of the facts concerning pollution of water in fecal emanations I do not know the cause of the disease, says this author, but believe I can connect it with the variations in the level of the *ground water in wells These variations allow the* subterranean waters to moisten the soil, and on retiring leave it damp It is when it is slightly moistened that it becomes dangerous Too much dryness of the soil or too much moisture prevent the development of the disease The new adaptation of this theory to micro-biological views does not seem to be any more convincing, and the doctrine of maturation of germs regaining their virulence in moist soil has not prevailed against that of transmission by potable water

Hence we have two great currents of opinion in the scientific world Some, with MURCHISON, admit the production of typhoid fever *de novo* "It is the despised spontaneity of the living organism," said PROFESSOR CHAUFFARD, at the Paris Academy of Medicine in 1877, "which dominates all the etiology and all the pathogeny of typhoid fever" STICH was one of the first to give an interpretation of the spontaneous theory by supposing that every individual carries materials for putrid intoxication in his intestine, which are constantly neutralized in the normal condition, but which under certain circumstances cause typhoid infection This was the opinion of PROFESSOR PETER also, who believed that the disease was manufactured by the patient himself, that autotyphisation was nothing but the results of retained waste matters in an exhausted organism

The opposite school, led by BUDD, believed, as we have seen in the specific nature of the disease, that every case arises from some previous case The discovery of the EBERTH-GAFFKY bacillus greatly facilitated the solution of the problem

EBERTH in 1880 was enabled, by using new coloring methods, to determine some of the morphological characters of the bacillus However, some doubts still remained as to its specific nature, notwithstanding the confirmatory observations of KOCH, MEYER, FRIEDLANDER and LETZERICK The discovery was completed by GAFFKY in 1884, who, by using new solid media, was able to isolate the microbe and study the form of the colonies, etc., on gelatine, potato and other materials.

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[2] "Rech sur la mal connue sous les noms de gastro enterite, fièvre putride," etc

So, from the vague theories and fanciful discussions of the humoralists and the pyretologists of olden times, we arrive at our modern conception of typhoid fever, which CHANTEMESSE defines as a general disease which is produced by the reaction of an organism invaded by the bacillus typhi-abdominalis.

THE CAUSES OF OLD AGE

A few years ago a pseudo scientific paragraph was traveling through the public press stating that an Italian physician had succeeded in detecting and cultivating the bacillus of old age—the cause of senile decay. As a skit at the microbic theories of disease then just achieving the popularity they have since held, it had its day and was soon forgotten, and one would not wish to revive it except as a reminiscence. It has its suggestions, however, of a theory to account for some of the symptoms of old age that may be not altogether unrelated to the truth, though they are at best merely suggestions and nothing more.

There is hardly any fact that is constantly before our observation, and yet is more incomprehensible than the reality of decay and death. When SIR THOMAS BROWNE described his life as "a miracle of thirty years" he expressed a truth, but not a greater one than was to be that of his death. Why the animal organism under perfectly normal conditions should be steadily on the up grade to a certain point, and from there as steadily on the decline till its final extinction is a question that no one can answer with certainty—we can only speculate. We can assume, it is true, that the vital heredity of the bioplasm, after a certain reproductive period, is transferred to another generation, that the germ plasm only is immortal, while the organism in general, without this invigorating principle or with it undeveloped or exhausted, naturally and gradually tends to its ultimate decline and death.

According to this theory we would expect gradual decay to begin after the cessation of the active reproductive period, and this falls in very readily with certain physiological facts and also with some therapeutic notions that have had a *limited* vogue, such, for example, as the comparatively recent one advanced by BROWN SEQUARD of the benefits from the testicular extract. There are, however, serious objections to the acceptance of the continuity of the germ plasm, and at best it can only be admitted as a rather captivating hypothesis, that may be true but is not a demonstrated scientific fact.

There is another possibility that may be invoked to account for senile decay that is, it is true, partly included in the foregoing, but which may perhaps have sufficient importance to stand alone as a factor. Our existence is a perpetual compromise between the contending influences that tend to growth or decay. Bichat defined life as "the sum of the influences that resist death," and many have since thought it would be hard to improve upon this *rather circular* definition. All our lives we are enveloped in unfavorable conditions, we carry the germs of disease always with us, only waiting for a favorable opportunity, and our system is itself constantly manufacturing and disposing of poisons that are, in themselves, capable of destroying life should by any accident its functions seriously fail in certain important particulars. These functions are constantly becoming disordered, sometimes by external, sometimes by internal agencies, and each time a draft is made upon our stock of vitality. During the period of active growth which in man and some of the higher mammals now covers many years, but which in its origin may have had a close relationship with the cyclic rotation of the seasons, the vital forces, so to speak, are predominant, and the disease germs and toxins can only exceptionally work disaster. When growth is complete the organism is at its best, but is not progressing, and the inevitable tendency is retrogression sooner or later under the steady and continuous attack of hostile agencies. The "microbes" of old age are all the disease germs that attack vitality, either consciously in actual disease or through the slow and by us almost unfelt sapping of the system in a thousand different ways which they must be constantly effecting at every point of least resistance. It may be, as has been conjectured by some, that every form of neoplasm, every morbid state has here and there its germs latent in the organism only waiting, as DR. CLOUSTON has expressed it, for some ebbing of the regulative and resistant cortical energy of the nervous center to leave them free to start on their distinctive career. This recognizes the supreme influence of the brain over vital processes, the control of all functions by the highest nervous center, the cortex of the brain, that formed one of the leading motives in DR. CLOUSTON's valedictory address as President of the Edinburgh Medico-Chirurgical Society, from which the above quoted opinion was taken. Of course the brain suffers with almost every pathologic process and according as its functions are impaired with advancing age the more rapidly do the symptoms of senility appear. But like others of the higher organs its resisting power is the greater, and in the normal course of events the cerebral cortex should be the last to completely succumb to the gradual onset of all the hostile agencies that produce old age. That this is often the case is shown by the numerous septuagenarians and octogenarians who have taken leading parts in the world's progress, and much of the world's best work is done by men past the time when it is generally supposed that brain weight begins to decrease and mentality to be impaired. The truth prob-

ably is that the most of us grow old too fast, that by our own fault or that of our progenitors we yield too soon to the microbes and toxins that hasten on old age

A HOLIDAY HINT TO THE RUSH MONUMENT COMMITTEE

It is the fashion, particularly since the disastrous ending of the China Japan conflict, to hold the Mongolian up to ridicule, and yet, notwithstanding our low estimate of Chinese methods, there is one feature in their economy that our higher civilization would do well to emulate It is a point of honor with the Chinaman of whatever profession or trade to begin the new year with his obligations all met and his balance-sheet squared, so that he is able to look his neighbor in the face clouded by no shadow of debt

Now that the great Christian holiday season which ushers our New Year is approaching, it would be well for us to imitate the Oriental barbarian and see that all our obligations are met One of these, binding upon every medical man in the United States, is the speedy redemption of the long-standing pledge to erect a monument to the great representative patriot physician of the Revolution It must not be forgotten that at the recent meeting of the American Medical Association at Baltimore, every delegate and member there present was by unanimous resolution constituted a member of the Rush Monument Committee, and that it was made his duty to obtain contributions from physicians residing in and about his district for this fund How many of these committeemen have as yet discharged that obligatory duty then imposed upon them and accepted by them? Had these *eight* hundred men collected only ten dollars each, it would have added *eight* thousand dollars to the fund, which would have been sufficient, with the amount in hand, to have erected a monument as appropriate as that to Marion Sims in Bryant Park at New York A very small subscription from the individual members of the profession in their several localities would make it possible for each of these committeemen to return twice that sum, and thus complete the erection of a monument in every way creditable to the profession, since it is no longer the question of a monument but of the kind of monument that will be erected

Shall it be only a $3,000 bust to stand as the measure of the appreciation of the regular medical profession of its immortal exemplar in the same city, and that the Capital of the Nation, with the splendid and costly work of art which the little band of homeopaths in the United States is prepared to erect during the coming year to the memory of their high-priest Hahnemann? Shall it not be at least as imposing and appropriate a testimonial as that which the still smaller body of members of the American Surgical Association is soon to inaugurate also at Washington in commemoration of their distinguished late President, Prof Samuel D Gross, of Philadelphia, or as the members of the profession of Law to its great representative, Chief Justice Marshall, or as the numerous statues to generals and others whose services to this new-born country and to humanity were not a tittle of those of this doctor, who saved men's lived and taught them how to lengthen them, and who offered up his own when he might have rested from his half century of professional work

If, however, it be the fact that the mass of the profession is indifferent or unwilling to subscribe even a half-dollar each to create a fund of $50,000, which some of the equestrian statues of military heroes at Washington have cost, then it is all the more the duty of the few, who have sufficient pride in their profession not to wish it disgraced by invidious comparison, to build *a greater monument than all yet standing* to this medical hero, who was greater than all those they represented Dr Henry D Holton, of Brattleboro, Vt, offered to be one of 100 physicians to subscribe $100 each to this fund, and Dr Wyeth, of New York City, one of six to subscribe $500 each Surely there are five other men in the medical profession in the United States who are able to make Dr Wyeth's offer good, or ninety-nine besides Dr Holton who can write a check for $100 for such a purpose at this Christmas season There ought to be in Dr Rush's native city of Philadelphia alone, where live the men who know his life and labors best—and who have most impressively eulogized him—Weir Mitchell, Pepper, Mills, Musser and a score of others, prosperous medical men—enough to supplement both Dr Holton's and Dr Wyeth's liberal offers Certainly there are twenty great cities in this country which can raise among their leading medical practitioners an aggregate of only $500 each, and if nothing can be expected from a general subscription, we advise the committee to appeal directly to these men for the funds they require to complete the project

It would be a proper recognition of the services of the Rush Monument Committee if its work were brought to an end by the concerted generosity of these few It would be an emphatic, practical expression of their admiration for the man who set the standard of medical worthiness at so high a level It would be a Christmas gift to the whole country to add another testimonial of approval of a life passed in its service to those already adorning its National Capital

The American Medical Association has so often, during the past eleven years, applauded the utterances of the Rush Monument Committee through its Chairman, and has resolved over and over again to complete the work, that it can no longer evade the obligation it has thus assumed, and at the last meeting in such specific terms that we earnestly hope it will like the Oriental merchant, begin the New Year with its account closed to its credit by the fulfillment of its pledged faith

CHRISTMAS, 1895

This issue of our JOURNAL contains some noteworthy contributions The members may indeed congratulate themselves on the value of the original articles herein presented, and that the authors have made the ASSOCIATION a Christmas present of enduring value

The articles of PROFESSORS GOULEY, ANDREWS and KELLY and others have more than a passing interest, and will be referred to again and again with pleasure and profit by all those who bind their JOURNALS

The renewed interest taken in the ASSOCIATION, and the enthusiasm manifested in the great work of enrollment of all the regular physicians of the United States in its membership argue great things in the future Let us not forget the necessity for renewed effort while enjoying the present, and while we listen to the merry Christmas chimes which ring their peal of gladness throughout the land let us determine that in the year 1896 the membership in the ASSOCIATION must be brought to ten thousand

Ten thousand educated regular physicians, united in thought and sentiment although separated by American distances, will become a power for good, the ultimate benefit of which no man can now foresee, but can only dimly comprehend

In union there is not only strength and power, but wisdom

CORRESPONDENCE

Foundation of the Lane Course of Medical Lectures in Cooper Medical College

SAN FRANCISCO, CAL, Dec 8, 1895

To the Editor —The undersigned announces that in accordance with a purpose which he has long entertained he has founded a course of lectures to be annually given in Cooper Medical College and the same to constitute a part of the instruction given in this institution The matter of these lectures shall be some subject within the domain of medical art and science, and they shall be ten or more in number, according to the option of the lecturer The lecturer selected to deliver this course shall be a man of superior eminence in the profession of medicine, and his selection shall be irrespective of nationality The lectures are to be given in the English language and are to remain the property of their author These lectures, when it is practicable to the lecturer, shall be delivered as the initial ones of the semester that begins in June This course shall be known as the Lane Course of Medical Lectures, and the sum of $2 000 shall be paid for each course Financial provision for the perpetual maintenance of this course has been made by the founder The lecturer shall be chosen by the founder during the latter's life-time, and should his wife survive him, the selection is to be made by her during her life time, afterward the lecturer shall be chosen by the members of the Corporation of Cooper Medical College

The friends of Cooper College will be gratified to learn that Dr William Macewen of the University of Glasgow has consented to inaugurate this course in 1896 Dr Macewen states he will be present to deliver these lectures about September 1, 1896

This course of lectures it is believed by the founder, beside adding to the efficiency of the instruction received by the students of Cooper Medical College, will incessantly animate them to industry in their studies through the opportunities which will annually be given them of coming in contact with some of the living leaders in medicine

LEVI COOPER LANE,
Pres Cooper Medical College

Hypnotism and Double Personality

NEW YORK, Dec 16, 1895

To the Editor —I am in doubt whether such a tirade as your correspondent on "Hypnotism" in the last number of the JOURNAL has indulged in deserves notice, for I very much *doubt* whether of the 5,000 or 6,000 intelligent physicians who read the JOURNAL *many* will be found who sympathize with the spirit which it *manifests* Passing by its scurrility, let me say to the readers of the JOURNAL that in these days it is scarcely necessary to discuss the "views" of men who on account of their dense ignorance of the subject have no right to have an opinion, but it *is* necessary to become acquainted with *facts* and to discuss them in a scientific spirit

Judging by the number of letters of inquiry I have received since the appearance of the articles on hypnotism in the JOURNAL of Nov 30, I am sure there are many physicians who are anxious to get at facts, and to know something definite regarding the subject This information can not be given in a letter, but for those who desire a plain, simple statement of the facts and history of hypnotism let me suggest reading "Hypnotism—Its History and Present Development," by Frederick Bjönnstrom, M D, published by the Humboldt Publishing Co, 19 Astor Place, New York, or, if they desire the latest philosophic views and therapeutic uses, get "Suggestive Therapeutics," by Prof F Bernheim, published by G P Putnam's Sons, New York, bearing in mind, however, that his extreme views on the subject of Suggestion are by no means unchallenged by authorities quite equal to himself

Neither can the subject of double personality be discussed in a letter, but I would like to emphasize the statement that the *alleged facts* bearing on the subject presented in the paper which seems to have stirred up the gall of my critic are *real facts*—account for them as we may

It is pleasant to know that my critic, and that of my confrères, since reading that particular number of the JOURNAL has had "reason to modify some of his 'views'" It is to be hoped that he has so modified them The only drawback to that cheerful hope is the difficulty of understanding how a man who has simply sat down in the densest kind of a fog can have *views* of any sort to modify

R OSGOOD MASON

Further Facts Concerning Life Insurance

MUNCIE, IND, Dec 13, 1895

To the Editor —Quite a number of the life insurance companies have banded together and formed an alliance to stop "rebates" In other words they have formed an association to compel themselves to conform to legitimate business principles Some of these companies are known as "racers," *i e*, they pay their agents large sums for securing new business, and these agents, in turn, divide the money with those who can be induced to take out new insurance

To guard themselves against this wrong these companies, now seized with a virtuous impulse, propose to pay a legal referee the sum of $2,000 per year as a salary In addition to this sum he is to be compensated for incidental expenses, and a still further allowance, not exceeding $3,000, for a secretary and clerical assistance!

When we take into consideration the fact that a new officer is to be appointed, and guaranteed $5,000 and incidental expenses besides, does it not look as though this might be one of the microbes that is causing the marked atrophy of medical examiners' fees? Let our microscopists examine this new germ so lately discovered in the insurance kingdom

I am glad to know that some honorable companies spurn such an imputation upon their honor, and refuse to enter into the unholy alliance PHYSICIAN

A Death from Vomiting

WASHINGTON, D C

To the Editor —I notice in your "Philadelphia Notes" of Dec 14 reference to case of death following a violent attack of sneezing The case was reported by Dr Morton at the December meeting of the Academy of Surgery Permit me to briefly relate a case of death from vomiting during an attack of influenza (la grippe) The patient, a man of nearly seventy years, had "dyspepsia" with symptoms of "liver disease," with occasional hematemosis During many years he had taken large quantities of bicarbonate of soda for the relief of so-called dyspepsia During a violent attack of vomiting he felt something "give way," as he expressed it and at once the vomiting ceased The writer could not see the patient for several hours after the vomiting ceased, his condition in the meantime was rapidly growing serious Great pain in the epigastrium extending rapidly over the abdomen Death resulted in eighteen hours from peritonitis At the autopsy an old cicatrix was easily discovered on the lesser curvature of the stomach about two inches from the pylorus The rupture had occurred at this point, with resultant sepsis and peritonitis I S STONE, M D

1449 Rhode Island Avenue

Concerning the Journal

FROM ONE OF THE OLD TRUSTEES

LITTLE ROCK, ARK, Nov 25, 1895

To the Editor —After reading the proceedings of the Board of Trustees, and your report as editor in the JOURNAL of Nov 23, I feel as if I must send you words of congratulation upon the progress and success you have achieved as manager of the JOURNAL in making it the equal, if not the superior of any other weekly medical journal published in the country It rests now with the members of the ASSOCIATION, and profession generally, to sustain it and maintain it, so that it may become the glory and pride of every reputable physician in the land

With my best wishes for you personally, and for the continued prosperity of the JOURNAL, I remain

Very truly yours, P O HOOPER

SAN FRANCISCO, Dec 8, 1895

To the Editor —The JOURNAL is to be praised for the excellence of its material during the past year

Yours truly, L C LANE

CHICAGO, Dec 11, 1895

I find the JOURNAL to be one of the best among the journals I am now reading R C WILSON, M D

CINCINNATI, OHIO, Dec 7, 1895

I congratulate you on the growth of the JOURNAL under your wise mangement It is easily the leader to day

CHAS A L REED, M D

PUBLIC HEALTH

Contagious Disease Hospital for Newark, N J —The health authorities of that city have been at great trouble to find a location in Irvington for the greatly needed hospital and disinfecting plant for infectious disease prevention and treatment The Board of Trustees for the latter town has concluded to cancel all permissions heretofore granted for the construction of the plant within the limits of that town, and that Board is said to have resisted very promising overtures on the part of the Newark authorities as to the mutual employment of the plant when in working order A part of the trouble seems to have arisen from the fact that the proposed beneficent and up to date institution has been styled a "pest-house" Immediately after that cry had been raised the community of Irvington began to protest as one man

A Sanitary Landmark —The meritorious work of the late Dr Thomas Fanning Wood, for many years the presiding genius of the North Carolina Board of Health, is one of the bright spots in the sanitary history of our Southern States Although Dr Wood passed away in 1892, there are those who keep his memory green In a decidedly out-of the way place, namely, in the columns for book reviews of the *Independent*, the following good point is made The allusion to Dr Wood as the sanitary "John the Baptist" of his State will be appreciated by all good North Carolinians His was the voice of one "crying in the wilderness" for many years The review in the *Independent* has reference to a pamphlet by the successor of Dr Wood in the secretaryship of the State Board, Dr Richard H Lewis, of Raleigh, entitled, "Drinking Water in its Relations to Malarial Diseases" The reviewer says

"This pamphlet, which the Board prints for general distribution, means to one familiar with the history of sanitation in that State far more than its thirty pages indicate It is the index of a great revolution in opinion, and of a general seeking of wisdom's ways that ten years ago would have been deemed impossible There rises up before the mental vision the figure of Dr Wood, the John the Baptist of that State, who paid for the printing of a biennial State Report ten years ago, that he could not afford to "post" back and forth for proof-reading, which was scarcely larger than this single chapter out of the Report for this year He died a true martyr to a noble cause Who says the South is *not* waking up?"

The Migration of the Croton Bug (Ectobia Germanica) —In the last number of *Insect Life*, Mr L O Howard reports upon the perculiarities of migration of certain water-bugs in our Southern cities, whereby new houses are suddenly overrun The following observation was made at Washington, D C One dark and drizzly day, late in 1893, a friend came to me and stated that he had just seen a remarkable sight on D Street, near the Department grounds A vast army of cockroaches, according to his story, was crossing the street A few hours later I visited the spot and found that the bulk of the army had disappeared, but that many stragglers still remained According to the statement made to me, the army issued from the rear of an old restaurant fronting upon Pennsylvania Avenue, and marched across the muddy street, undeterred by pools of water, ash heaps, and other barriers, directly south to the front of the building opposite

This building was a machine shop, and at the direction of the foreman several of the men took brooms and swept back the advancing horde They swept until their arms were tired, but were unable to stem the advancing tide The foreman then directed that a line of hot ashes from the furnace be laid along the brick sidewalk This proved an effective barricade The foremost cockroaches burned their antennæ and their front legs and the army divided to either side and scurried down into the area ways of adjoining buildings in which they disappeared The march is said to have continued for two or three hours and many thousands of the insects crossed in this way A moment's glance, after arriving at the spot showed me that the insect was the croton bug and that nearly all of the individuals were females carrying egg cases

I called at the restaurant and found to my surprise that no house cleaning had been going on, and that no especial effort had been made by the application of insecticides to rid the establishment of the roaches

It seems then to have been a true migration, a development of the true migratory instinct in the croton bug The restaurant had become over populated, perhaps not for its actual denizens, but certainly for the thousands of about-to-be born young The maternal instinct originated the migratory instinct and the army by one common impulse started on its journey for more commodious quarters The darkness of the day is significant, and there is no reason to suppose that similar migrations do not frequently occur but undoubtedly under ordinary circumstances at night This is the way that new houses become infested

Health Reports —The following health reports have been received by the Supervising Surgeon General Marine Hospital Service

NOTE —(Correction is hereby made of a clerical error published in our issue of Dec 14, 1895 The item "Ceara Oct 24 to 31, 2 cases, 2 deaths," should be under the heading "Yellow fever—foreign," not as placed under heading "Cholera—foreign ")

SMALLPOX—UNITED STATES

Arkansas Mississippi Co, Oct 12 to Dec 12, 75 cases, 13 deaths
Arizona Nogales, Dec 9, 3 cases
Lousiana New Orleans, Dec 1 to 7 7 cases, 3 deaths
Michigan Detroit, Nov 23 to Dec 7, 4 cases, 1 death
Ohio East Liverpool, Dec 14 1 case, Bridgeport and vicinity, Dec 14, 18 cases, Martin's Ferry, Dec 14, 22 cases,
Pennsylvania Philadelphia, Oct 1 to Dec 12, 2 cases

SMALLPOX—FOREIGN

Antwerp, Nov 20 to 27, 1 death
Barcelona, Oct 1 to 31, 12 deaths
Buda Pesth, Nov 18 to 28, 2 cases
Constantinople, Aug 1 to 31, 14 deaths
Dublin, Nov 27 to 30, 2 cases
Glasgow, Nov 23, to 30 3 cases
London, Eng, Nov 27 to 30, 1 death
Manchester, Nov 16 to 23, 1 case
Naples, Nov 9 to 16, 7 cases, 7 deaths
Odessa, Nov 16 to 23, 2 cases, 1 death
Prague, Nov 16 to 23, 12 cases
Rotterdam, Nov 28 to 30 2 cases
Warsaw, Nov 9 to 16 1 death
St Petersburg, Nov 16 to 23, 6 cases, 1 death

CHOLERA—FOREIGN

India Bombay, Nov 5 to 12, 14 deaths, Calcutta, Oct 26 to Nov 2, 29 deaths
Austria Hungary, Nov 6 to 18, 47 cases 39 deaths, (from Aug 23, date of outbreak to Nov 18, 350 cases, 234 deaths
Russia Volhynia, Sept 29 to Oct 12, 2,901 cases, 1 190 deaths, Kiev, Sept 29 to Oct 12, 59 cases, 37 deaths, Rustengebiet (Siberia), Oct 2 to 15, 4 cases, 1 death

YELLOW FEVER—FOREIGN

Cuba Cienfuegos, Dec 1 to 8, 2 deaths
Puerto Rico San Juan, Nov 22 to 29, 115 cases, 19 deaths

SELECTIONS

Vesical Hernia.—The patient, age 56 years, had a protrusion in the right inguinal region as large as a plum, soft, tympanitic, completely reducible An operation was desired and disclosed a lipoma on the innerside of a hernial sac, and attached to the lipoma a diverticulum of the bladder, only recognized by the flow of urine following incision The bladder had penetrated the aponeurosis, making a direct hernia, while the hernial sac noted by the side of lipoma was indirect The vesical incision was closed and Kocher's radical operation carried out Recovery without complication —*Münchener Medicinische Wochenschrift*, 1893, No 32

Variations in Immunizing Power of Serum from the Horse —Ceni has reported to the Medico Surgical Society of Pavia his experiments to determine the fluctuations in the antidiphtheritic immunizing power of the blood-serum of horses in consequence of muscular exertion So long as the muscular activity is not injurious to the system there is no reduction, rather a slight increase, but over taxing work, which is accompanied with reduction of body weight, greatly influences the immunizing power For example, a horse which yielded serum of 80 units strength after twenty-five days of hard labor causing loss of 90 kilograms in weight, furnished serum of only 20 units strength —*Wiener Klinische Rundschau*, Sept 1, 1895

The Changes in the Thyroid Gland in Exophthalmic Goitre —Lubarsch (*Centralbl für Allg Path u Path Anat*, Bd vi, No 15) examined a number of thyroid glands in exophthalmic goitre and found certain quite constant changes, among which the following are the more important 1, In these thyroids he found only rarely real gland follicles, mostly there were present dilated spaces clothed with epithelium in which more or less marked papillary formations were observed, 2, these spaces contained but little or no colloid material, but, 3, a fluid of mucoid appearance In regard to the pathogenesis of exophthalmic goitre, Lubarsch expresses the opinion that the changes in the thyroid gland are not secondary and not due to primary changes in the sympathetic or the medulla oblongata, as has been advanced by some writers Hypersection of colloid material can not be regarded as the cause, because the enlarged thyroid in this disease does not secrete much if any colloid substance In all probability it concerns an unknown etiologic factor which brings forth the changes observed in the nervous system as well as those in the thyroid gland

The Post Mortem Findings in 180 Suicides —Heller (*Centralbl fur Allg Path u Path Anat*, Bd vi, No 18) describes the postmortem findings in 180 instances of suicide observed in Kiel The ages varied from 9 to 82 years It was found that 20 6 per cent committed suicide by shooting Statistics show that in Prussia 13 3 per cent of the suicides shot themselves and the larger percentage of this mode of suicide in Kiel is explained as due to the presence of so many soldiers Concerning the anatomic changes which would allow some deductions as regards responsibility, the following may be stated In 10 4 per cent there were no changes in the brain which would allow the inference that there had been any disturbance of the brain functions, in 6 per cent there was some changes, in 9 9 per cent marked changes, as, for instance, chronic leptomeningitis, pointing in direction of psychic alterations In 48 4 per cent there were very marked cerebral changes which would militate against the theory of responsibility for the act of suicide, and among these were numerous alcoholics Six per cent were insane In 19 3 per cent there was present either acute febrile disease, menstruation or pregnancy in women

Contribution to the Pathologic Anatomy of Puerperal Eclampsia. —Luesden (*Virchow's Arch*, Bd CXLII, Heft 1) examined exhaustively two fatal cases of puerperal eclampsia and summarizes his observations and conclusions in regard to the pathologic anatomy as follows 1 The two cases afforded no evidence whatever of an infectious or bacterial origin of the eclampsia 2 The cause of eclampsia seems to be some toxic substance circulating in the blood 3 The organic changes that merit the first consideration in eclampsia are the renal affections (In both of Leusden's cases there was a well marked nephritis) 4 Multinucleated cells, first found in the lungs by Schmorl, were presented in both these cases, and such cells correspond fully with the so-called giant cells of the placenta 5 The presence of these cells is simply an accidental occurrence 6 It has not been possible to demonstrate that these cells have any power to cause the formation of fibrin 7 The development of other substances in the placenta capable of causing fibrin formation could not be proven in either of the two cases 8 Embolism of liver cells was not found in either of these two cases 9 Limited necrosis of the hepatic parenchyma was present in both cases, but this *could not be regarded as the cause of the eclampsia* 10 The hyaline thrombi in the capillaries of the lungs and the liver were presumable secondary changes, and these thromboses are not peculiar to eclampsia 11 The hyaline thrombi in the lungs are looked upon as of close relation to *the development of the acute pulmonary edema*

New Anatomic Nomenclature —The new anatomic nomenclature referred to in these columns recently, seems to have met with strong opposition in one quarter Prof Dr R Kossmaun, of Berlin, while he welcomes the attempt to harmonize designations in anatomy, yet feels himself called upon to point out in the *Deutsche Medicinische Wochenscrift* many imperfections, some of which, at least, might have been easily avoided His points of issue are, the question of accentuation, the etymologic correctness as Latin terms, and the hybrid composition of some of the designations The Commission decided at Munich to indicate by an accent the proper pronunciation We can all realize how easily a slip is made by a careless lecturer, and repeated and carried out by students, but we can hardly conceive the need of correction so great in this country, as is indicated by a quotation in Professor Kossmaun's article, to wit "*Nos Pôloni non curamus quantítatem syllábarum*" The excuses of the Commission for this change in plan are poor, and it remains a defect Under the second head is noted the false Latinization of the Greek eidos, for instance, ziphoidens instead of ziphoides, os ethmoidale instead of os ethmoides In ethmoidalis we see a Latin termination applied to a Greek stem Mesovarium lymphoglandula and epitrochleoanconeus are instances of hybrid words, the last named starting with a Greek stem followed by a Latin, and terminating in a second Greek The critic would also banish fibrocartilage, mentolabialis, oculomotorius, in favor of fibricartilage, mentilabialis and oculimotorius, in correspondence to classic instead of late Latin models He notes also the use of gastroepiploicus, instead of gastrepiploicus, parotideomassetericus for parotidomassetericus By other instances, also, we see that our anatomic terms are often not formed on classic models, and that much thought must be given to the subject before we arrive at a correct anatomic nomenclature

Influenza and Encephalitis —Nauwerck (*Deutsche Med Wochenschr*, 1895, No 25) had the opportunity to examine, bacteriologically, two fatal cases of influenza-encephalitis The first case was that of a girl who became ill with brain symptoms one week after an attack of influenza, and died after seven days There were found several foci of softening and venous thrombosis in the cerebrum, but the bacteriologic examination was negative In the second case, a young woman presented violent symptoms of brain inflammation preceded by coryza and pains in the joints, death ensuing on the third day On opening the cranial cavity the convolutions were found flattened, and on incising the bulging corpus callosum 50 ccm of turbid watery fluid flowed out In the right cerebellar hemisphere was a walnut-sized apoplectic area with grayish-red softened walls Inoculations on blood-serum agar with the ventricular fluid resulted in a growth *on* but *one* tribe In this tribe there developed in the incubation a delicate, transparent, granular culture which consisted of very small bacilli without capsules and diplobacilli with rounded ends Compared with Pfeiffer's photographs they appeared somewhat larger than, but shaped much like, the influenza bacilli *Reinoculation failed to* produce further growth Cover-glass preparations from the ventricular fluid showed these bacilli to be the only microorganisms present These bacilli were also found in sections from the hemorrhagic focus in the cerebellum, although in but small numbers Nauwerck concludes that they were influenza bacilli, and that the cerebral disease was due to these microorganisms only In the first case, in which the bacteriologic examination was negative, it is asumed that the bacilli had already died at the time of the post-mortem The bacilli are thought to have reached the *brain* by way of the blood

The Buried Tendon Suture —At the recent meeting of the Southern Surgical and Gynecological Association, held in Washington, Dr Marcy, of Boston, read an interesting and instructive paper upon the history of the buried animal suture and the best methods of its preservation and use Since he was the first to suggest the employment of buried sutures and demonstrate their value, his contributions upon this subject are of more than ordinary importance His first contribution upon the buried catgut suture was published in 1870 In 1880 he substituted tendon for catgut, as in every way superior, and in various articles he has called the attention of the profession to the importance of its general adoption

Dr Marcy stated that the defect of catgut is inherent in its structure, and that it can not be rendered satisfactory by any method of preparation "The connective tissue sheath from the intestine of the sheep, from which catgut is manufactured, has its ultimate fibers disposed in an oblique direction, crossing one another diagonally This serves the physiologic purpose of permitting foreshortening and distension as well as strength" The violin string, catgut of commerce, is not unlike a very thin piece of tissue silk which has been cut diagonally and then twisted This would make a very imperfect fish line, and Dr Marcy thinks the comparison not overdrawn When dry *the gut is strong, but when* wet is flat, elastic and slippery, a state which necessarily pertains after implantation in the tissues Chromicised tanning only partially remedies this defect and sterilization by any process can not correct the damage which the inter*cellular cement substance has sustained from the bacterial* infection and maceration process to which, in preparation, the catgut is necessarily subjected

Properly prepared tendon not only escapes these injuries, but has an entirely different ultimate construction The *connective tissue cells are disposed parallel to each other*, and are the strongest structures of the animal economy of equal weight, carefully selected tendon will sustain a tension equal to that of silver wire Tendons taken from the freshly killed animals are quickly sundried and kept dry until their *first preparation Soaked in a 1 to 1,000 mercuric solution* until supple, the tendons are carefully cleaned, assorted and dried between sterilized towels They are then chromicised until of a dark golden yellow, and preserved in sterilized linseed oil to which one-tenth part of the crystals of carbolic acid *has been added Sutures thus prepared improve by* age When desired for use, they are soaked in 1 to 1 000 solution of bichlorid of mercury until supple Preserved in absolute alcohol, boiled in it under pressure, boiled in kummel (oil of carroway seed), indeed, prepared by any other of *the many ways suggested for the sterilization of catgut*, serve only to injure the inherent structure of tendon and are not to be commended The tendons from the tail of the smaller varieties of the kangaroo furnish by far the most valuable suture material yet found The anatomic construction of *the psoa muscles of the rat, squirrel and opossum is not un*like that of the kangaroo, each fassiculus having its independent tendon extending the entire length of the tail The tendons of these smaller animals are too short and fine, those from the large kangaroo too large The latter, when subdivided, fray and are less *valuable Dr Marcy reported that* from various sources, kangaroo tendons have recently been put upon the market which are very defective One lot of three hundred pounds, collected for him, was almost entirely from the large kangaroo, and so undesirable that he refused *its acceptance This at a price, has found its way into the* American market and is being distributed to the profession Selected tendon should be furnished at $10 per hundred, although usually sold at a much higher price Dr Marcy has secured reliable parties who prepare the tendon subject to his supervision, and it may be *obtained at this price by* addressing him

Dr Marcy closed his paper with an account of his many histologic experiments upon animals and of his large surgical experience He expressed the belief that all aseptic wounds including *even the larger amputations*, should be closed in layers by the buried tendon suture without drainage The edges of the skin are coaptated by means of a parallel continuous buried suture (subcuticular), and the wound is sealed with iodoform collodion, strengthened by a few fibers of cotton The advantages of the buried tendon suture are briefly as follows *Aseptic*, buried in *aseptic* wounds they remain *aseptic* the repair is primary without inflammation, pain or suppuration, the iodoform collodion seal renders subsequent infection impossible, no sutures are to be removed, and no other dressing is required the tendon is absorbed so slowly that it may be traced months after implantation, ultimately it is replaced by a band of vitalized connective tissue which serves as a permanent reinforcement to the united structures

Tuberculosis in the Yellow Race—Dr Ernest Martin, of the French Legation in China, has just published an important work on this subject, from which is taken the following

The population, composed of what ethnography designates under the name of *Yellow Race*, forms in itself a third of the whole population of the globe The two important questions to study in this connection are 1 Does tuberculosis exist in this race? 2 At what period did it appear there?

Chinese medical works describe a disease called *lao ping*, which means a disease which seats itself in the lungs, and, spreading throughout the system, consumes like fire The writings of European doctors who have practiced among this people furnish more explicit reports Rennie, in the course of an extended practice at the hospital of Tam Soui, the most important and populous city of the island of Formosa, treated 22,000 different disorders, among which the different forms of tuberculosis appear for only 1 25 per cent M Geurin, surgeon in the French army, who has passed three years among the Formosans, reports that they are endowed with a strong constitution, which makes athletes of them, and that there is very little consumption among them According to the statistics of M Dudgeon, physician of the dispensary of Pekin, which is maintained by the Evangelical Society of London, out of a total of 3,157 diseases treated in 1865, tuberculosis was mentioned only 36 times M E Britschneider who for twenty years has held the position of doctor to the Russian Legation at Pekin, declares tuberculosis much less frequent in that city than in St Peterburg The personal experiences of M Ernest Martin, covering several years and gained principally at the Orphanage of Gen-Tse-Tang, at Pekin, have furnished him with similar proofs He writes ‘Consumption is very infrequent there, even among the most wretched class of people, notwithstanding the fact that the public hygiene of the capital leaves much to be desired Having therefore proved the infrequency of tuberculosis in the Yellow Race as compared with the nations of Europe, let us find out the causes Let us study into the state of society, the public institutions and hygiene, and see if they can throw any light on the subject The density of the population of China surpasses nearly all other countries in the world The cities are closely packed, but their population is not equal to the large cities of the civilized world Tien sin counts about 950,000 Fou-Schow 630,000, and Canton 1,600,000, the largest population unless we consider Han-Keon and Han Yang as a single center, the population of which would be about 3,000,000 In none of these cities do we find such crowded quarters as certain localities in Paris, where they count 3,000 persons to a hectare

“As there are no great industries in China, we do not find the accompanying evils of large factories and crowded tenements Barracks are done away with entirely There is no standing army in China There are thousands of Tartars, soldiers of the Imperial standards, but they live with their families Although a nation counting at least 400,000,000 souls, it might be said that she has no army in the European sense of this word According to the latest statistics concerning consumption in the French army, it would appear that 40 per cent of the cases were contracted in the army Here, then, is one source of contagion not found among the Chinese

‘Extended imprisonment is another source to consider It is true the Chinese prisons are foul dens, with no attempt for hygiene, but while their laws are strict, they do not misuse this form of punishment Penalty of death, exile, the bamboo, and the cangue are most often inflicted The first of these does not permit of a long imprisonment, exile does not bring on consumption, the blows of the bamboo are quickly dealt, and as for the cangue the condemned generally carries it without being imprisoned—he has his liberty and goes about wherever he chooses Nevertheless, public hygiene is almost wholly neglected in China The inundations due to the falling away of the land and to neglect of public works are the source of continuous and deadly epidemics

The capital itself is no exception It is an object of disgust to strangers The sewers, which date from the fifteenth century, have been out of repair for some time, and have become the receptacle of all the débris and the source of the typhoid epidemic which reaps large harvests yearly The wealthy, living in their great yamens, are less exposed to it, as are also the foreign residents, thanks to their good hygiene, and more than all to their exodus into the neighboring hills during the torrid heat of summer Such is the state of affairs in Pekin, and the other cities of the empire are no better in sanitary matters It is not, therefore, in the city masses which, although not as closely packed as those of Europe, are also less numerous, but where, on the other hand, hygiene is scarcely regarded at all that we must seek for the explanation of the infrequency of tuberculosis”

In considering the question of personal hygiene, and especially of alimentary hygiene, Dr Martin finds no positive evidence to help in explaining the situation of things Alcoholism, which in Europe constitutes a powerful factor in tuberculosis, scarcely exists among the Chinese They are sober, and sober they remain at all points of the globe where their emigration reaches They smoke opium, it is true, but, though millions of them are addicted to this habit, it is very seldom that they go so far as to undermine the constitution and suffer in consequence the same fate as drunkards—that is, to become consumptives

The chapter devoted to the biological and ethnic peculiarities of the race, which throws some light on the subject, is full of interest and the result of careful research In connection with the domestic life of the Chinese, Dr Martin mentions the fact no animal milk is ever used in feeding infants Maternal nursing is the rule, hired nurses the exception, and artificial feeding quite unknown The life of the woman is necessarily quiet Her time is passed almost entirely in her own apartments, which she quits only to make visits of ceremony or to go to the temples and family tombs The mutilation of the feet, inflicted upon the Chinese woman, is not without its injurious effects, and does indeed seriously impair the health of a large number of children This custom is, however, strictly carried out only among the higher classes As the nature of the Chinaman is passive to a remarable degree, he rarely experiences those great shocks from which it is so difficult for others to recover We give in full the concluding remarks of this important work

“In a word, then, the yellow race is, although not wholly free from tuberculosis, comparatively so as compared with the other races of the world We credit this infrequency of the disease, and the comparative immunity, to certain social and ethnic conditions And are these conditions liable to change? Will not the emigration of this people to so many different points of the globe, particularly to the New World, bring about such a result? For, although many of them remain permanently in strange lands without any hope of returning, the majority eventually go back to their native land, carrying with them to a great extent, the morals and customs of the countries of their temporary exile On the other hand, there are many foreign residents in China, and the natives are quick in imitating whatever evil example the former may set The opium habit which is increasing daily is an illustration of this fact However strong, up to the present day, may have been the resistance of this people against all innovations which Europe has attempted to introduce, the day will undoubtedly come when the advance will be sounded and then a decided change in the social state of the country will place her in such condition that she must fatally undergo the evil results of civilization, one of the most certain evidences of which is tuberculosis—*Journal d' Hygiene, Paris*

SOCIETY NEWS

Chicago Ophthalmological and Otological Society—Regular meeting, held Nov 12, 1895, at 155 Dearborn Street, F C Hotz, M D, in the Chair

There were twenty two members and visitors in attendance

Minutes of the last meeting were read and approved

The Secretary read the applications of Drs E T Dickermann, of Chicago, and C M Robertson, of Davenport, Iowa

The applications were referred to the Committee on Membership

Dr Hale showed a young man of 19, whose vision had always been bad O S, v c—20 = 3-200, v being eccentric

O D, v c — 20 = 5 20 There were well-marked choroidal changes in both eyes, central in O S

Dr Hale wished to know if the members were in favor of removing the lenses in such a case?

Dr Tilley thought that, in general, such an operation would be justifiable

Dr Coleman had a case where he needled the lens, which was slightly cataractous Before the operation a minus 20 was needed to give the best vision Three operations were done After the first one there was some pain, but not after the second and third There was only slight improvement in consequence of the operation, but the vitreous was full of opacities which interfered

Dr Coleman thought it unwise to ever extract the lens in such cases, needling being the only operation

Dr Wilder spoke of the dangers of starting up a quiescent inflammation by any such operative procedure On the whole, however, he thought the risks were justifiable

Dr Holmes thought the fundus changes contraindicated operation as a rule

Dr Hale then spoke of the clinic at Kiel, and referred to the uniform kindness and courtesy of Prof Voelckers The University of Kiel is a small one, but the buildings are modern and the eye clinic, especially, is very complete The general operating room he considers one of the best in Europe Prof Voelckers is a very energetic and charming man He was a favorite pupil of Donders and a fellow student of Knapp, of New York

While the great ship canal was being built, the clinic was much increased by the workmen, who suffered greatly from conjunctival diseases, especially trachoma

Methods of treatment of various diseases of the eye were described at length Refraction is very poorly done according to American ideas, almost no cylinders are used Voelckers is a beautiful operator He does advancement for squint, iridectomies in cataract operations, and prefers enucleations to eviscerations

Dr Wilder then read a paper entitled "Pulsating Exophthalmus" (This paper will be published)

Dr Gradle had seen a case of vascular tumor of the side and floor of the nose which was slowly removed in twenty operations, this large number of operations being required on account of severe hemorrhages, and only a little being done at a time Three weeks after the tumor had been entirely removed there was diplopia due to interference by pressure of the same side with proptosis, but no pulsation This disappeared however, in three months

Dr Coleman showed a new milliampèremeter by Schulmeister

The Society then adjourned by limitation

Annual Meeting of the Marion County Medical Society —At the annual meeting of the Marion County (Fla) Medical Society the following officers were elected for the ensuing year President, W V Newsom, First Vice-President, D A Smith, Second Vice-President, T J Myers, Secretary, R P Izlar, Treasurer, W R O Veal On motion the following resolutions were adopted

Whereas, The various life insurance companies throughout the United States have reduced the fee for medical examinations from $5 to $3,

Resolved, That the members of the Marion County Medical Society refuse to make such examinations for less than $5

Resolved, That this preamble and resolutions be spread upon the minutes of the society and published in the medical press of the United States

Also the following which was carried

Whereas, This society believes that a Department of Public Health under control of a secretary, who should be a member of the cabinet of the President of the United States, is necessary to the welfare of this country therefore, be it

Resolved, That the society indorses the bill now pending to establish such Public Health Department, and requests our members of Congress to support said bill and aid in its passage

Resolved, That the secretary be requested to transmit a copy of the foregoing preamble and resolutions to our senators and representatives in Congress

Resolved, That this preamble and resolutions be spread upon the minutes of the society

Dr W V Newsom, as president, delivered his annual address to the society on the "History of Medicine," and responses to calls were made by Messrs Reardon, Bullock, Bittinger, Anderson, Brumby and Izlar Rev Dr Law invoked the blessing and protection of the Deity

NECROLOGY

F P Porcher, M D, the eminent physician and professor, died at Charleston, S C, on Nov 19, at the age of 70 He was a South Carolinian by birth, of Hugenot extraction He took his A B and M D degrees from his home colleges, the latter in the year 1847 He served as surgeon in the Confederate Hospitals of Petersburg and Norfolk, was President of the State Medical Society and visiting physician to the Charleston City Hospital He was professor of materia medica and therapeutics in the Medical College in the State of South Carolina, and was the author of works on pharmaceutical botany His "Resources of the Southern Fields and Forests" reached two editions, those of 1863 and 1869, the former being a book of over six hundred pages His contributions to medical literature were varied and instructive

F L Bond, M D, of Menominee, Mich, Dec 3——C E Edwin, M D, of Kansas City Mo, Dec 7——L B Perry, M D, of Winamac, Ind, Dec 11, aged 43——Elias Jessup, M D, of Whittier, Cal, Dec 3, aged 62——William B Porter, M D, of Chicago, Dec 12——H C Garner, M D, of Kansas City, Mo Dec 10——Levi Keehn, M D, of Syracuse, N Y, killed by a railroad train, Dec 10——M B Folwell, M D, of Buffalo, N Y, Dec 10, aged 54——A J Hobart, M D of Clinton, Iowa, Dec 6, aged 70 ——Thomas Cox, M D, of Marietta, Ohio, Dec 10

MISCELLANY

International Congress of Thalassotherapy —The French Association for the Advancement of Science will hold its next session in Tunis in April, 1896, and on that account the International Congress of Thalassotherapy will be held at the same time and place

Semi-Centenary of the Discovery of Anesthesia —According to *Nouveau Remèdes*, the Medical Press Association of France is engaged on the proposition of its Secretary General to celebrate in some way next year the semi centenary of the discovery of anesthesia (Sept 30, 1846) A committee consisting of Messrs Cornil, Lucas-Championniere and Beaudouin has been designated to prepare the program

Chicago College of Physicians and Surgeons —A press dispatch dated Champaign, Ill Dec 10, imparts the following Five representatives of the Chicago College of Physicians and Surgeons arrived in town this evening to confer with the Board of Trustees of the University of Illinois regarding the annexation of the medical school to the university This project has been under discussion the last two years by stockholders of the College of Physicians and Surgeons

Without Fear —Dr Belman, a well-known Suffolk doctor, had a great contempt for homeopathy An old lady who pinned her faith to Hahnemann, one day took five globules by mistake for three, and, her own doctor being absent, Dr Belman was sent for post-haste He came, looked grave, shook his head and said if people would meddle with dangerous drugs they must take the consequences "But, madam" he added, "I will die with you," and lifting the bottle of globules to his mouth, he swallowed its entire contents —*Salt Lake Tribune*

The Red Cross in Cuba —The medical men of the United States have made their influence felt in respect of the Red Cross on nearly every battle-field of the world Cuba is the field at the present time Red Cross work in that country is being conducted by an American missionary there, Dr A J Diaz The New York *Independent* has learned that he has organized and located seven Red Cross hospitals in the section where the fighting is most frequent and where the Spanish Government has about twenty thousand soldiers At each station there are a native physician, two women nurses and about ten male helpers The Spanish Government officials have given formal recognition of their satisfaction in this humane work

The Medical Staff of the Fire Department of New York City —The Fire Commissioners have lately voted to make a radical change in the staff of surgeons serving that Board The following named physicians have been removed Drs Frank L Ives, Robert A Joyce, John J Quigley and James A Mc Laughlin The new appointees are Drs Fred A Lyons, Edwin B Ramsdell and Francis M Banta It was decided that the Department would hereafter require three physicians instead of four The new appointees were chosen from the civil service list and began their duties Dec 1 The salary of these surgeons is $2,000 per year The Commissioners alleged that they removed the surgeons named, or some of them, for cause It is possible that the two junior removed surgeons will resist the action of the Commissioners by lawsuit They were duly appointed from the civil service list

A Medical Explorer —The medical profession has yielded several explorers Their names are enrolled among those who have helped to rescue Central Africa from barbarism Emin Pasha and Dr Parke will not soon be forgotten Among the feats which had hitherto baffled the efforts of the most intrepid travelers was the exploration of Lake Rudolf Thomson and Gregory both tried to reach the lake from Masailand, but were defeated in their endeavors by the hostility of the native tribes and the dangers of the climate A young American medical man, Dr Donaldson Smith, has however, succeeded in reaching Lake Rudolf from the north through Somaliland He is thus the first white man who has visited this *terra incognita*, and geographers are looking forward with interest to the publication of his records and diaries Dr Smith was in Somaliland on a sporting expedition and hearing that no white man had ever penetrated to Lake Rudolf from the north he determined to make the attempt He came to England and made preparations for this serious and dangerous expedition He left London last May, and took with him Mr Gillett, a taxidermist, and Mr E Dodson The former was obliged to return home It has always been believed that Lake Rudolf lay in the midst of a fertile country rich in ivory, but peopled by implacable and hostile tribes We congratulate our medical colleague on being the first to bring light into this dark continent —*British Medical Journal*, Nov 23

The Gold Headed Cane and Other Mannerisms are now Happily Defunct —According to a writer in *Lippincott's Magazine*, a great gain has been made in and for the profession of medicine by the shelving of its distinctive marks of attire and demeanor He says

"A very gratifying tendency has marked the development of the medical profession in the last generation The slough of manerism, the formal dress, the owl-like solemnity have been thrown off, and the physician, by his own choice, is being judged more by his actual attainments than by external appearances Thirty years ago, a bald head, a white beard and a long frock coat were as much a part of the physician's equipment as his diploma Now, on the other hand it is no infrequent occurrence for an elderly man of real ability and modern in his methods of practice, to lose a patient through the fear that he may not be fully abreast of the times What can be further from the old traditions than a leading surgeon lounging about in an outing shirt and blue belt, or a distinguished physician playing polo? Yet these amusements are simply a relaxation from the tension of professional study One of the best indications that people are learning to judge their medical advisors by their merits is the fact that the advertising physicians are being driven to the wall, despite the most specious extrinsic evidences of success that the shrewdest business methods can produce"

Traumatic Mastitis in Men —At a late séance of the Paris Academy of Medicine, M Auguet reported the case of a carter 23 years old, in good health, without tuberculous or syphilitic antecedents, who received a violent blow in the right breast by being struck by his horse's head The force of the blow knocked him down, and he lay unconscious a few seconds, upon rising he felt no inconvenience save slight pain over the contused area, and was able to continue the journey That night, however, the pain prevented rest, it was of a neuralgic character, shooting to the shoulders and arm, and the following morning he sought medical advice Upon examination the right pectoral region was found to be swollen and hot, around the nipple was a swollen area in the mammary gland involving the upper and external lobes, the gland was the size of a hen's egg, it was painful, mobile, there was no echymosis nor osseous lesions Treatment consisted of wet compresses, then, the inflammation having subsided by frictions with Neapolitan ointment, cupping and compression of the breast In a month the cure was complete but the gland while having a normal consistence remained enlarged It has continued to increase in size until at present, a year after the accident, it forms a considerable prominence The submammary groove is obliterated, the nipple is pushed down and in, and the lobes of the gland can be felt distinctly through the skin, The swelling extends 10 centimeters above the nipple, 12 below, 8 to the outer side and 4 to the inner It is troublesome by reason of its size, so much so that ablation seems indicated, but it is absolutely painless and there seems to be no morbid change in the glandular tissue Consequently we have to deal with a simple hypertrophy of the breast, following traumatic mastitis —*Le Bulletin Medicale* 1895 No 78

Sufficiency of Charge of Practicing Medicine Without License —By the act of the Legislature of 1891 to establish a State Board of Health and regulate the practice of medicine in the State of Nebraska, it was made unlawful for any person to practice medicine, surgery or obstetrics, or any of the branches thereof, without first having obtained and registered a certificate from the State Board of Health as provided in the act Certain exceptions were made by Section 11 of the act, but were not from the operation of the portion of the law which required a certificate to be obtained from the State Board of Health, and its registration by persons practicing medicine, surgery or obstetrics After the expiration of six months from the passage of the act, the persons designated in the exceptions were as liable to prosecution for non compliance with the law in these particulars, as any others Consequently, the Supreme Court of Nebraska holds, in the case of O'Connor v State, decided Oct 15, 1895, that as the subject of the exceptions did not become a part of the description of the offense of non compliance with the provisions of the act or limit or qualify the language of the act creating such offense, no negative averment in regard to the exceptions is necessary in an information charging a person with practicing medicine after the six months has elapsed, etc , without having complied with the provisions of the act In this, the court overrules a former decision to the effect that a negative averment in regard to the matter of the exceptions was necessary in an information of that character The statement in the statute that "any person shall be regarded as practicing medicine within the meaning of this act, who shall operate or profess to heal or prescribe for or otherwise treat any physical or mental ailment of another," the court further holds, is a definition of practicing medicine, and that, in charging the crime of practicing medicine without having complied with the provisions of the act, there must be a statement of facts showing the doing by the accused person of one or more of the acts included within the foregoing statutory definition

Bacteriologic Examination of the Blood in Typhoid —Dr Martin Thiemich discusses this question on its practical side The attempts to find the bacilli in the feces are far from being always successful, and latterly the differential diagnosis between the typhoid bacillus and non-pathogenic intestinal bacteria is found to be attended with extreme difficulty By puncture of spleen during life, however, the bacteria is obtained in most cases, and in blood from a rose spot the positive results have out numbered the negative, and the identification of the bacillus is easier from both of these sources A resumé of the results of different investigators is given, followed by his own in seven cases Every precaution was taken in his cases to avoid contamination So far as known, there is no one characteristic of the bacillus of typhoid, obtained through the microscope or by cultivation, which alone will distinguish it from other microbes, but there must be an assemblage of points The diagnosis was regarded assured in the 7 cases reported, when the typical invisible growth was present on potatoes, when no gas formed in either case, milk, or grape-sugar agar When milk was not coagulated, the indol reaction was negative and gelatin plates showed no vine-leaf veining In the seven reported cases, typhoid bacilli were found from rose spots in three (no rose spots present in one case), and from blood from a vein in a fourth In the three fatal cases bacilli were found, after post-mortem, in the spleen, also in one in the lung with Fraenkel's pneumococcus in pneumonic foci, and in one case in the mesenteric glands with staphylococci In the fourteen cultures from blood staphylococci developed six times, whether from contamination or their presence in the blood could not be decided —*Deutsche Medicinische Wochenschrift*, Aug 22, 1895

Practical Notes

Chlorohydrate of [Pilocarpin —During the epidemical grippe this year in the village of Plancher-les-Mines and its vicinity, M Poulet had occasion to test the usage of chlorohydrate of pilocarpin on 108 patients suffering from grippe and pneumonia He administered the salt in a daily quantity of 05 centigr , the treatment lasted usually two days, rarely three days Out of the 108 cases, there were only 4 deaths —*Revue Internationale*

Local Treatment of Neuralgia —(SABBATANI)

℞	Menthol	
	Guaiacol āā	1
	Alcohol, absolute	18

M S Gentle friction with the aid of a pencil to the painful parts, with 4 grams of this mass The parts are then covered with wadding The dressing may be repeated two or three times in twenty-four hours —*Ther Wochenschrift*, 1895, No 35, and *Nouveau Remedes*

Cure of Prostatic Hypertrophy by Section and Ligature of the Vas Deferens—The priority of the idea of the employment of castration for prostatic hypertrophy belongs to Launois This operation has been put in practice and tested by Ramm, White, Broome, Haynes and Mouillin, but castration is not always readily accepted , it has, moreover, a certain degree of gravity Deja Bier, in 1894, proposed the ligation of the internal iliac arteries, with the idea of causing atrophy of the prostate Isnardi recommends a simpler operation, and one that is a perfect substitute for castration, which has all the advantages, without the inconveniences, namely Section and ligation of the deferent canals He has employed this method twice , the first case is conclusive , a cachectic old man, suffering from visceral cancer, which carried him off in two months The second case is very instructive , a man aged 72 years, suffering from retention and incontinence, due to prostatic hypertrophy Left testicle atrophied in consequence of blennorrhagia epididymis The rectal touch revealed on the right side a large tumor like the half of a nut, while the left side showed none Operation, May 1, 1895 , section of the right vas deferens between two ligatures Patient recovered from his urinary troubles, the prostate diminished in volume, and the right testicle became atrophied like the left —Isnardi, *Gazzette di Torino*, No 31, 1895

Pulmonary Surgery —In a discussion which took place in the *Société de Chirurgie* (Nov 20, 1895) M Ricard related an operation in which he had exsected a portion of the eighth rib, incised the pleura and then with a thermo cautere incised the lung to a depth of seven centimeters The incision was made toward the center at the level of the opening. MM Dienlafoy and Giraudeau had previously examined the patient and located the abscess opposite the inferior angle of the scapula When M Ricard had passed the thermo-cautere into the lung to the depth mentioned, he then passed in his finger for further exploration He felt an induration toward the mediastinum near the diaphragm. He was satisfied from the touch that an abscess existed, and he passed a trocar along his finger and punctured the mass Pus followed, the cavity was drained and the patient recovered M Ricard concludes from the case that in deep pulmonary suppuration neither percussion, auscultation nor exploratory puncture are sufficient to invariably determine the seat of the lesions He believed it necessary to open the pleura and pulmonary tissue, and he therefore was of opinion that the method of M Tuffier of detaching the parietal leaf of the pleura, would add to the natural difficulty

M Tuffier in reply reaffirmed his view that the detachment of the pleura allowed the finger to transverse the entire lung surface, and he maintained that it was better to put the hand "*on* the pleura than *in* the pleura"—*Gazette Médicale de Paris*, Nov 23, 1895

Treatment of Vesico-Vaginal Fistulæ by Intra-vesical Suture ; Recovery —According to the *Medical Week*, Prof Duplay presented before the Paris Academy of Medicine, on Nov. 19, a surgical case of great interest

A woman 31 years of age was affected with a vesico-vaginal fistula, situated much too high up to permit of freshening and suture through the vagina I therefore decided to resort to supra-pubic cystotomy, followed by intra-vesical suture

The operation was performed on July 15 last After incision of the abdominal wall and bladder I easily found the fistula, which was situated transversely in the floor of the bladder, and measured about 2 centimeters in length by 1 centimeter in the antero-posterior direction With the aid of long bull dog forceps and a curved bistoury I detached the vesical mucosa all around the fistula, and freshened its edges I then placed two rows of sutures, one in the vaginal, the other in the vesical wall, the former being silk and the latter catgut sutures By this means the fistula was completely closed, both toward the vagina and the bladder. The hypogastric wound of the bladder was thereupon united by two rows of catgut sutures, one of which was placed in the mucous, and the other in the muscular coat Lastly, the abdominal wall was closed, a small drain being left in at the lower end, a slightly compressive, iodoform gauze and cotton wool dressing was applied, and a self-retaining Sims catheter was introduced The patient made an uneventful recovery No urine escaped through the vagina after the operation, and a month later she was discharged completely cured, the only disturbance being slight vesical tenesmus. I have heard from her since Recovery has been fully maintained, and her general health, which before the operation was somewhat impaired, is now excellent

Treatment of Pernicious Anemia.—Prof William Pepper is reported in the *Medical News*, Nov 23, as presenting to the class at the University of Pennsylvania his views as to the causation and therapy of pernicious anemia The case in point before the class has had for its origin some form of intestinal disease in a patient who always " bolted " his food, and who has for years had occasional attacks of dyspepsia and diarrhea The motor power of the stomach is impaired, and an atrophy of the gastric tubules has undoubtedly taken place, his debility is extreme, and there exists a high degree of oligocythemia with corresponding oligochromemia and poikilocytosis There are microcytes and macrocytes, misshapen cells and nucleated cells, giant cells and dwarf cells The treatment is perhaps less obscure than the causation To begin with, muscular exercise should be forbidden Absolute rest in bed is for some weeks imperative and almost complete confinement to bed is advisable for a considerable period longer General massage is an excellent adjuvant, and should be persistently employed Inunctions of cod-liver oil, given once daily, have seemed to Dr Pepper to improve nutrition, and they are being given to this patient

The treatment, by dietary and by remedies, of the case in question was carried out along the following lines

"The gastro-intestinal tract demands the most careful diet and treatment, and in these matters each case must be studied for itself This man's diet consists of finely minced Hamburg steak delicately broiled, so that all the juices are retained, dry toast or stale bread, and hot milk with a little coffee in it In the last few days he has seemed to enjoy eating, and he does not suffer from nausea However the diet may be modified, it must be highly nourishing, given in small quantities and often Hydrochloric acid is generally indicated, and this man is given a couple of drops after each meal His bowels have been loose, and we have been washing out his colon daily with warm water and following this with an injection of a weak solution of silver nitrate Were not his stomach so well-behaved with his present diet and treatment I should practice gastric lavage, and cases have been reported where striking results have followed this procedure.

'For the blood we have one drug that exerts over many of these cases a most marvelous influence—arsenic Under its use some cases recover entirely, others improve greatly only to relapse The drug must be pushed to the limit of tolerance—10, 15, or even 20 drops of Fowler's solution thrice daily, guarded with a little opium to counteract the tendency toward diarrhea You must watch carefully for constitutional signs of over-action, as puffiness under the eyes and gastro intestinal irritation and should these appear the dose must be reduced An irritable stomach does not in itself contraindicate arsenic, as the stomach often improves under its influence. But should the drug aggravate the irritability of the stomach, it should be administered hypodermically Iron rarely does good early in the treatment, when convalescence is well established it may be advantageously combined with the arsenic Lately bone marrow (of lambs and calves) has been tried in the form of glycerol extracts, in some cases with reported good results In extreme cases the hypodermic injection of large amounts of normal saline solution, direct transfusion of blood, and the injection of defibrinated blood have all been resorted to in some reported cases to good advantage Treatment must be persevered in for a long time after the blood has been brought back to a good condition, and the patient must be kept under the most careful dietetic and hygienic conditions, and guarded in every way against the all too frequent relapse This man has been under treatment nearly a fortnight He expresses himself as feeling better, his appetite has improved, he bears the large doses of arsenic well, and his blood has gained 7 per cent in hemoglobin and 100,000 red cells over the estimation on admission"

Conservative Surgery at La Pitie—An Old Treatment Revived.—If the views of Dr Paul Reclus are correct and borne out in the future history of hospital surgery, the days of the amputator are over A recent clinical lecture by that well-known Parisian practitioner and professor repeats and emphasizes views that he has already given to the profession He has already spoken upon the subject before the Congress of French Surgeons for 1895 The clinical lecture from which we are about to quote is given *in extenso* in the *Medical Week* for Nov 22, as delivered by the author at the La Pitie Hospital, and may be considered to be the pronunciamento of a radical conservatism in surgery Will it survive? Is the hot water "embalming" process greater than the Catling? The former is a small part only of an enthusiastic presentment of these highly vital questions Prof Reclus says

"Whatever the extent or gravity of the lesions, *I never, under any circumstances, amputate* the injured limb, but merely wrap it in antiseptic substances by a veritable embalming process, leaving nature to separate the dead from the living tissues This method of treatment possesses the double advantage of being much less fatal than surgical exeresis, and of preserving for the use of the patient, if not the entire limb at any rate a much larger part thereof than would be left after amputation

"I should not have the courage, however, to advocate this uncompromisingly conservative treatment, were it not for the excellent effects of hot water, which I use freely Briefly stated, my procedure in such cases is as follows The patient, who is almost invariably in a state of collapse from the shock, pale, anemic and cold, is placed on the operating table, where he is wrapped in hot blankets, only the crushed limb being left exposed The skin of the latter is shaved, all fatty substances are removed by the aid of ether, alcohol or potassium permanganate, and when this preliminary disinfection has been thoroughly done, the injured parts are carefully cleansed

'The principal agent employed for this purpose is hot water from a cistern placed at a sufficient height above the bed to insure a forcible jet The temperature of the water should be between 60° and 62° C, but not higher, for, if it should reach 64° C, the heat would be sufficient to alter the albuminoid constituents of the tissues This jet of hot water is made to irrigate all the injured surfaces, and to penetrate into all the hollows and under all the detached parts of the wound, without exception This is the only way of removing all clots, and to wash away all foreign bodies, together with the microörganisms they may contain

'The advantages of this application of hot water are threefold In the first place, at this high temperature it is antiseptic It not only removes such germs as may have entered the wound from contact with the clothing or ground, but it also neutralizes their effect At 62° C the development of microbes is checked Miquel has shown that when 1 cubic centimeter of liquid was maintained for fifteen minutes at a temperature of 55° C, the number of bacilli contained therein fell from 3,500 to 33 Moreover, I mix with the water a small quantity of antiseptic substances, the potency of which, as is well known, is greatly increased by heat

'In the second place, hot water is hemostatic Oozing is arrested, the smaller veins and arterioles contract, vessels of a certain size continuing to bleed, however, unless the recoil of the coats and the retraction of the intima has resulted in the formation of an obstruction

"In the third place, water of a higher temperature than 60° C helps to compensate for the loss of heat resulting from the bleeding and especially from the traumatic shock The dangerous hypothermia gradually gives way, and in the majority of cases under my observation I have found that when the patient left the operating table his temperature had already risen to normal instead of being subnormal, as is the rule after an amputation has been performed for the purpose of remedying the effects of a traumatism I need hardly insist upon the improvement in the prognosis under such conditions When this irrigation has been done, it only remains to have recourse to the process of embalming which I have described in the paper referred to above"

Society Notes

A REGULAR meeting of the Cuyahoga County Medical Society was held at Cleveland, Ohio, Dec 5——At the annual meeting of the Society of Medical Jurisprudence held in New York, Dec 9, the following officers were elected President, Edward F Brush, M D, Vice-President, S B Livingstone, Corresponding Secretary, R Safford Newton, M D ——The Northwestern Ohio Medical Association held its fifty-first semi-annual meeting in Findlay, Ohio Dec 12-13 The following officers were elected President, Dr Charles Graffe, Sandusky, Vice-President, Dr Charles Slocombe, Defiance, Secretary, Dr J Parker Baker, Findlay, Assistant Secretary and Treasurer, Dr T M Gehrett, Deshler Defiance was chosen as the next place of meeting, Dec, 1896

Hospital Notes

THE McDONALD MEMORIAL HOSPITAL OF NEW YORK CITY — This is a new hospital for colored persons and others to be located on West Twenty fifth Street, adjoining the Bethel

Church The McDonald Memorial Hospital was incorporated about three months ago It is named after the late Dr McDonald, the most eminent colored physician of New York The hospital will draw no radical line Its services will be free to all, irrespective of race or creed It is founded to bring advanced medical aid closer to the people It will open with a free dispensary When the necessary funds are available there will be a training school for colored nurses It will depend for support chiefly upon the colored churches and the contributions of the white Liberal donations have been promised toward the establishment and support of a well-equipped pharmacal department, and also of a surgical clinic with the kind of apparatus, etc , that is most essential to such an institution

The State Hospital for the Insane in Kings County, New York —Some changes have been made in the personnel of the New York hospitals for the insane At the asylum in Flatbush, a ward of the city of Brooklyn, Dr Robert M Elliott, of Rochester, has been appointed by the State Board of Lunacy Commissioners as Medical Superintendent The new appointee will hold the same relative position at Flatbush that Dr Deering does, who is in local charge of St Johnland Dr Sylvester, the General Superintendent, has been performing the dual functions at Flatbush for some years, and the creation of this new office will give him a better chance to look after both institutions The new officer has been for five years an assistant at the hospitals at Rochester, and his present change is in the line of a promotion Since the State took charge of the King's County insane, under the State Care Act, they have created this office of Medical Superintendent at Flatbush Their first appointment was Dr Thomas E Branford, of the Hudson River State Hospital, but he speedily resigned after viewing the accommodations offered him

The Masons have volunteered to furnish a room in the new city hospital at Binghamton, N Y ——The directors of the Pittsburg Chamber of Commerce have unanimously adopted a resolution recommending that the municipal authorities adopt measures to provide isolated hospitals for contagious diseases ——The financial report of the Southern Indiana Hospital for the Insane shows that the cost of conducting the institution during the past year has been nearly $85,000 The Superintendent reports $15,000 expended out of the special appropriation for the construction of new buildings, with a balance of $15,000 ——The third annual report of the Massillon, Ohio, State Hospital has been made The total disbursements during the year were $64,446 17, and the report showed a balance of $194 56, Nov 15, 1895 The trustees ask that $300,000 be placed at their disposal for the purpose of improvements and additional buildings

Detroit Notes

At the regular meeting of the Detroit Medical and Library Association Thursday, Dec 8, Frederick Robbins read a paper on "The Use and Abuse of Urethral Injections" The author reported two recent cases of gonorrheal urethritis cured in less than ten days by wiping out the first ten inches of urethra with Ag No$_3$ gr x–xx to the ounce, followed daily for five days with large douches of Hg c½ I–40000 He condemns the routine use of the syringe as unscientific, useless and dangerous, as it is only useful in the latter stages of an uncomplicated anterior urethritis He emphasized the fact that the Ultzmann syringe is absolutely essential for treatment of many cases of posterior urethritis

The Wayne County Medical Society held a regular meeting Dec 12 The subject, "Hypnotism," was presented by Cassius M MacDonald in an interesting manner

The Report of the Health Office for week ending Dec 14, 1895 Deaths under 5 years, 27 , total, 75 Births Male 36, female 37 , total, 73 Contagious diseases for week ending Dec 14, 1895—Diphtheria Last report 30, new cases 6, recovered 14, died 15, now sick 40 Scarlet Fever Last report 21, new cases 6, recovered 2, died none, now sick 25 Smallpox Last report 1, new cases 2, recovered none, died none, now sick 3 Measles Last report none, new case 1, recovered none, died 1, now sick none

Cincinnati Notes

Mortality Report for the Week Gives the Following —Membranous croup 1, cholera infantum 1, diphtheria 3, typhoid fever 6, zymotic diseases 4, cancer 3, phthisis pulmonalis 14, other constitutional diseases 4, apoplexy 7, bronchitis 4, convulsions 5, gastritis 2, meningitis 3, nephritis 2, peritonitis 3, pneumonia 8 other local diseases 21, violence 7, under 5 years 27 Total 110 Rate per 1,000, 17 02 Corresponding week 1894, 137 , 1893, 193 , 1892, 113

At the Academy of Medicine Dec 9 Dr E W Mitchell read an elaborate paper on "The Anemias," which was discussed by Drs F Southgate and N Wolfstein

Dr J C Culbertson has been elected Commander of the E F Noyes Post G A R , of this city

The Announcement of the new Laura Memorial College appears with the following faculty J M Withrow, Professor of Gynecology , J L Cleveland, Theory and Practice of Medicine , E W Walker, Surgery , G F Sudhoff, Histology , L S Colter Obstetrics , E M Riley, Materia Medica , O M Sprague, Chemistry , S E Allen, Pathology and Bacteriology , G W Ryan, Orthopedic Surgery , Giles S Mitchell, Diseases of Children , A G Drew, Dermatology , C R Holmes, Ophthalmology , J E Boylan, Laryngology , Chas E Everett, Medical Jurisprudence

An Ambulance service has been established in connection with the City Hospital The Hospital Corps of the First Regiment of Infantry O N G , located at Cincinnati under Drs F W Hendley, G I Cullen and Chas H Castle, has been granted the privilege of the patrol wagons for this service, and the members have volunteered their services in this line of work Two members of the Corps are privileged to admission at the Cincinnati Hospital each night

An epidemic of typhoid fever is raging at Waddy, Ky The scarcity and impurity of the water supply is thought to be the cause

The report of the Columbus State Hospital shows a per capita cost of $138 69 in comparison with $144 91 of 1894 At the beginning of the year there were 652 male and 612 female patients on the rolls There were admitted during the year 185 males and 152 females , death rate 5 25 per cent

Dr W D Hoge, Dr J L Hervey and several others were arrested at St Clairsville, Ohio, charged with running the smallpox quarantine They all live at Martin's Ferry, which is quarantined against and the accused, it is alleged, passed the lines by denying their place of residence

Bellaire, Ohio, is now cut off by quarantine from West Wheeling, Bridgeport, Ætnaville and Martin's Ferry Street cars have been stopped There are about 25 cases of smallpox and a large number of suspects on hand

Philadelphia Notes

Extirpation of the Gasserian Ganglion —Dr W W Keen, at the last meeting of the Philadelphia County Medical Society, presented two patients, upon each of whom he had performed Krause's operation for removal of the Gasserian ganglion for inveterate facial neuralgia , both were men, and represented the earliest and the latest of a series of six cases The first one had been operated upon twenty-six months ago, the last one only nineteen days before, and each reported complete relief from the former attacks of pain The chief points in the communication were 1, the control of hemorrhage (by packing with gauze, deligation, etc) with comparative ease, in a case of rupture of the middle meningeal artery at the foramen spinosum He did not favor preliminary ligation of the internal carotid artery on account of the possible ill effect upon the nutrition of the cerebrum and a tendency to softening which might result, he especially dwelt upon the fact that the entire ganglion may be removed, a feat considered impossible even by so competent a critic as Horsley, until Krause showed that it could be done Dr Keen presented a specimen of the ganglion removed from the last case without mutilation, and showing the motor root The latter is not to be found in the illustrations of specimens removed by Krause, accompanying his article in the recent issue of the *Archiv für Klinische Chirurgie*, 3, the influence of the removal of the gland upon the nutrition of the chorea was shown by the tendency to ulceration after the operation This could only be overcome by stitching the eyelids together, which expedient was successful in the last case The mortality was small, only one death occurred in the six cases, and this was attributed to infection of the third case through an unaccustomed assistant The superiority of extirpation over mere destruction of the ganglion was referred to

Proposal to Establish a Pay Hospital for Contagious Diseases —A committee has been appointed by the Philadelphia County Medical Society to formulate plans and to take such steps as will secure for this city sufficient accommodation for those patients suffering with diphtheria and scarlatina, and particularly for those who desire and will pay for special hospital quarters The present Municipal Hospital has not sufficient accommodation for the present demands upon it, and no special rooms for paying patients In all probability the Council will respond to the urgent demand and will authorize the construction of additional pavilions in connection with the present structure, instead of building a new hospital

The Judson Daland Medical Society has been organized among the medical students of the University of Pennsylvania in conformity with the custom which has been introduced of late years into this time honored institution of dividing up the medical classes into groups, in honor of individual members of the faculty

The Medico-Chirurgical College has commenced work on its new clinical apmhitheater located between the main hospital building and the maternity Beside the amphitheater, the structure will contain three private operating rooms—surgical, gynecologic and ophthalmologic—with a large and complete sterilizing apparatus Provision will be made to flush the amphitheater after each day's demonstration or lecture, so as to insure surgical cleanliness During the coming year, a new six-story laboratory building is to be erected at the corner of 17th and Cherry Streets, on ground recently purchased, and the institution is to establish its own electric light plant

Dr A F A King, of Washington, Professor of Obstetrics in the Columbian University, was the guest of the Philadelphia Medical Club, which gave him a reception at the Bellevue Hotel, Dec 11 A large number of local representative physicians were present The President of the Club, Dr H A Hare, introduced Dr King, who made a most appropriate and entertaining brief address, in which he indulged in some reminiscences of his student life in Philadelphia when the University was at 9th and Chestnut Streets, and Agnew and DaCosta lecturers in the Philadelphia School of Anatomy and the old Chestnut Street Quiz Association

Diphtheria —The number of cases of contagious diseases in the city reported since Oct 1 are 957 of diphtheria, with 814 deaths In spite of isolation and disinfection, the number of cases of diphtheria do not appear to be on the decline Two cases of smallpox and one of typhus fever have also been reported

By invitation of the Surgical Section of the College of Physicians and Surgeons, Dr L McLane Tiffany Professor of Surgery in the University of Maryland, read a paper on Dec 13, on 'The Treatment of Compound Fractures of the Lower Extremity," and Dr L S Pilcher, surgeon to the M E Hospital, Brooklyn, and editor of the *Annals of Surgery*, gave the results of his personal experience in the "Ambulant Treatment of Fractures" Dr Edward S Martin of Philadelphia, made some remarks on "Fractures of the Leg Treated by the Ambulant Method," and Dr Thos F Branson reported a "Case of Fracture of the Coronoid Process of the Ulna" The discussion was general, and was opened by Dr John Ashhurst A reception was tendered the guests of the evening at the residence of Dr John B Roberts, after the meeting adjourned

Washington Notes

Weekly Report of the Health Department —The report of the Health Officer for the week ended Dec 7 is as follows Number of deaths (still-births not included), white 46, colored 40, total 86 Death rate per 1 000 per annum, white 12 8, colored 23 7 total 16 2 Death rate per annum corresponding week last year, 16 8 The death list last week was materially below the normal A decline of nigh 20 per cent in the number of deaths took place, as compared with the week before From 107 the number fell to 86 The mortality from consumption went from 17 to 7, and from acute lung maladies from 26 to 11 Two deaths from typhoid fever occurred as against 4 by the last report The prevalence of diseases of the brain and nervous organs stood at about the same degree as has been maintained for the last several weeks, while that from kidney disorders shows a fall of from 5 to 2 deaths The dangerous contagious diseases present no tendency to assume epidemic form Of the fatal cases of diphtheria reported, 2 were attended with serious complications The annual death rate for the week was 16 2, while for the corresponding period of last year it was 16 8

Alumni Association Election —At the annual meeting of the Alumni Association of the Columbian University held on the 13th inst, Dr Chas W Richardson was elected President for the ensuing year

Inspection of Beef Postponed —Secretary of Agriculture Morton has extended the time for the enforcement of the meat inspection law from Jan 1, 1896, to March 1, 1896 Shippers who fear inspection of their meats should be looked upon with suspicion Good meat can never be depreciated in value because of a proper certificate that it is from a healthy animal

For the Home for Incurables —The promoters of the endowment fund of the Washington Home for Incurables have adopted a novel scheme for raising money Cards were sent out which will just receive a fifty cent piece and hold it securely These were sent to a great many residents, and although the fund is considerable already, it is the intention to make it so large that the institution may never be at a loss for money

Surgeon-General Sternberg's Address —Surgeon-General Geo M Sternberg, U S A, the retiring President of the Biological Society of Washington, at the annual meeting last week delivered a most instructive address on the subject "The Practical Results of Bacteriologic Researches" His remarks were illustrated by lantern slides, showing the many phases of bacterial life

Pathologic Laboratory for the Children's Hospital —The pupils of Norwood Institute have raised the sum of $1,000 for the benefit of the Children's Hospital The good work was done at the suggestion of Dr S S Adams, one of the attending physicians of the hospital, who has decided the fund shall be devoted to the organization of a pathologic and bacteriologic laboratory for the institution

Physicians to the Poor —Dr Charles N Emmons has been appointed a physician to the poor Dr D G Lewis has been appointed in place of Dr H S Goodall, whose appointment expires on the 15th instant Dr F O Roman has been appointed in place of Dr C V Petteys, and Drs J R Shands and G L B Jarvis have been appointed to serve the poor during the absence of Drs T Clark and J R Devereux Dr G W Wood has been appointed in place of Dr C W Bordsall, whose appointment has expired

Benefit for the Children's Hospital —The benefit for the Children s Hospital which will take place at the National Theater Tuesday afternoon next, is attracting a great deal of attention The New National Theater School of Acting is the medium through which the benefit is given, and two plays are to be presented, the first being "My Wife's Dentist,' and the second, "Broken Hearts

To Regulate Veterinary Medicine in the District —The Commissioners will shortly present to Congress for passage a bill regulating the practice of veterinary medicine and surgery in the District of Columbia Dr Robinson, representing the District Veterinary Medical Association, appeared before the Commissioners and presented a draft of a bill which had been agreed upon by that body, and which he urged be presented to Congress for enactment

The bill provides for the appointment of a board of five examiners, who shall be members of the Veterinary Medical Association, the terms of office to be limited to three years Meetings for the examination of applicants are to be held on the first Tuesday in January, April, July and October of each year It further provides that all persons practicing veterinary medicine in the District shall apply to the board for a license, which the board may refuse, and may revoke a license for chronic and persistent inebriety, for advertising in such manner as to deceive or defraud the public or for failure to report any case of contagious disease required by law to be reported The bill also provides that all persons receiving a license to practice veterinary medicine shall register at the health office For practicing without a license the offender may be punished by a fine not exceeding $100 nor less than $50

Medical-Director Gihon's Report of the Naval Hospital —From the report of Dr Gihon the following quotation is taken The total number of cases treated at this hospital since its establishment, Oct 1, 1896, is stated at 8,065, of which number 2,525 were discharged to duty, 314 were condemned by medical survey and 118 died Over 82 per centum of the cases admitted into the hospital since its foundation have been returned to duty, 10 per centun have been invalided from the service by boards of medical survey for disabilities unfitting them for further duty, and less than 4 per centum have terminated fatally Four of the typhoid cases originated at the old barracks at the marine headquarters and two at the navy yard, one on board the Dolphin and the other on board the Dale

Medical Society of the District —At the meeting of the society held on the 11th instant, Dr Burnett reported a case of intra cranial tumor and presented the specimen Dr Beth reported a case of skin grafting for ectropion and presented the patient for examination Dr S S Adams reported a case of ulcerative endocarditis with specimens, with Dr Reed's report on the bacteriologic experiments from the case Dr H L E Johnson reported seven cases of abdominal sections (gynecological) and presented the specimens

Surgeon General Tryon's Report—In the last annual report of the Surgeon General to the Secretary of the Navy, he touches upon a most important questions The sanitation of Government war vessels He says " Up to a very recent date no ship had ever been constructed in which the question of the health of the crew had been scientifically considered in the design itself, and there have been few after construction in which intelligent effort has been directed to the preservation of health The great idea in all time has been to sweep the sea—to have dominion over the waters For this purpose ships have been built as mere engines of war, and with but little consideration for the fact that the most indispensable mechanical instruments are men themselves Ships were few, and represented much time and money, men were many, and could be easily replaced And thus for hundreds of years much more anxiety was exhibited in preserving arms from rusting and cordage from rotting than in considerations affecting the health of crews

Report of the Superintendent of Charities —From the valuable report of the Commissioner of Charities the following quotations are made "As shown by the report of the sanitary officer to the superintendent of the metropolitan police, public patients were sent to the hospitals by that branch of the District service during the late fiscal year as follows Freedman's Hospital, 936, Providence Hospital, 848, Hospital of the Washington Asylum, 292, Garfield Hospital, 255, Emergency Hospital, 121, Homeopathic Hospital, 97, Columbia Hospital, 66, Children's Hospital, 31, and 5 to the Sibley Hospital Many patients in maternity cases are sent to Columbia and other hospitals from dispensaries The Children's Hospital receives through the same channel, as well as from child caring asylums Accident cases are brought to the Emergency Hospital by its own ambulance service, and other medical establishments accept inmates coming by transportation, public or private, other than that of the sanitary office The figures given above show a total of 2,751 cases sent to hospitals by the sanitary officer during the fiscal year ended June 30, 1895 During the succeeding quarter, the months of July, August and September, 1895, there were sent to the hospitals in the same manner 1,102 patients, or at the rate of 4,408 cases a year The number exceeds that recorded during any previous quarter, and the fact shows that, even when no serious epidemic prevails, the hospital accommodations of Washington are no more than adequate to the demands upon them During the summer and fall at all places of medical refuge, the usual accommodations were fully occupied, and it was necessary to improvise additional ones in order to meet the urgent demands for treatment of public patients There were also a sufficient number of case of the minor infectious cases treated by make shift isolation in the homes and improvised isolated quarters furnished by the medical charities to further enforce the necessity of final and sufficient action upon this long-postponed but vital subject

Emergency Hospital Examinations —An examination will be held on the 20th inst at the Central Dispensary and Emergency Hospital to fill three vacancies in the house staff

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THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S Army from December 7 1895 to December 13 1895

Capt William P Kendall, Asst Surgeon, upon the expiration of his present leave of absence is ordered to Ft Sam Houston Texas, for duty

First Lieut John S Kulp, Asst Surgeon will upon the expiration of his present leave of absence, be relieved from duty at Ft Spokane Washington and ordered to Ft Walla Walla, Washington, for duty

Capt William B Banister, Asst Surgeon, leave of absence granted is extended one month

First Lieut James M Kennedy, Asst Surgeon, leave of absence granted is extended two months

Capt Charles E Woodruff, Asst Surgeon now on leave of absence, is ordered to proceed from Washington D C, to Ft Snelling Minn and report for temporary duty without delay

RETIREMENTS

Major Richard S Vickery Surgeon, is retired from active service this date Dec 7 1895

Capt Freeman V Walker Asst Surgeon is by direction of the President wholly retired from active service this date, Dec 4 1895

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending December 14, 1895

P A Surgeon G T Smith, detached from the "Ranger" and ordered to the "Adams"

Asst Surgeon M K Johnson ordered to the Naval Laboratory and Department of Instruction New York

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Change of Address

Brown, F H from Pythian Temple to Widdecomb Bldg, Grand Rapids Mich

Eads S O from Beaver Crossing, Neb to Science Hill, Ky

Kneedler W L, from Fort Mason to San Diego Cal

Kelly W D, from 7th and Wabasha Streets to Lowry Arcade St Paul Minn

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LETTERS RECEIVED

Alta Pharmacal Co, St Louis, Mo Alma Sanitarium Co Alma, Mich

Blackman Max S Wales Center, N Y, Blodgett F J, New York, N Y Baldwin T S, Quincy, Ill

Christison I S Chicago Ill, Clarke Almon, National Home, Wis Cochran Jerome, Montgomery, Ala Croft, Benj P New York, N Y Chambers J H St Louis Mo, Colwell, A W, New York N Y

Eads S O, Science Hill Ky Edwards, John B, Milwaukee, Wis

Freeman Walter J, Philadelphia, Pa

Gouley J W S, New York, N Y Gardner, R W, New York, N Y Globe Mfg Co, The Battle Creek, Mich

Howle W P Oran, Mo Hicks Wm H, Newark N J Hooper, P O Little Rock, Ark Howe, Lucien Buffalo, N Y Hummel, A L, Adv Agency New York, N Y

Izlar R P Ocala Fla

Jenkins J F Tecumseh Mich Jelks, Jas T Hot Springs, Ark Johnson H L E, Washington D C

Kelly Howard A Baltimore, Md, (2), Kneedler W L, San Diego Cal

Larkins, E I, Terre Haute, Ind Lord & Thomas, Chicago Ill

Marion Sims College of Medicine St Louis Mo Moffett, E D, Indianapolis Ind Morse, Lyman D Adv Agency New York N Y, Maltine Mfg Co The New York, N Y Merrick, M B Passaic, N J

Pharmaceutical Era, The, New York N Y

Reed R Harvey, Columbus Ohio Rohé, Geo H Catonsville, Ind Reed, Chas A I Cincinnati, Ohio, Rosser, C M., Terrell, Texas, Revue Internationale, Paris France

Stearns Frederick & Co, Detroit Mich Schirmer G Chicago, Ill Schadle J E, St Paul, Minn Schering & Glatz New York N Y Surgeon General, U S A, Washington, D C, Subscription News Co, Chicago Ill

Taylor, P Richard, Louisville Ky Tyree, J S, Washington, D C

Vogeler, Adolf G, Chicago Ill

Wyckoff R M, Brooklyn, N Y, Woodbury, F Philadelphia, Pa

Zumo Pharmacal Co, St Louis Mo

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ORIGINAL ARTICLES

PRIMARY OR ACUTE CONFUSIONAL INSANITY

Read in the Section on Neurology and Medical Jurisprudence at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY DR JAMES G KIERNAN

FELLOW OF THE CHICAGO ACADEMY OF MEDICINE PROFESSOR OF FORENSIC PSYCHIATRY, KENT LAW SCHOOL PROFESSOR OF NERVOUS AND MENTAL DISEASES MILWAUKEE COLLEGE FOREIGN ASSOCIATE MEMBER FRENCH MEDICO-PSYCHOLOGICAL ASSOCIATION

Fifteen years ago, Dr E C Spitzka[1] described under the term "primary confusional insanity," (an approximation of the German title "Verwirrheit" applied to the same mental states) a form of insanity "which develops rapidly on a basis of cerebral exhaustion Consciousness is blurred in parallelism with the conceptional disturbance and the patients on recovering have, as a rule, but very crude recollections of their condition Its duration is variable, comprising weeks and months The prognosis is, as a rule, as good as that of stuporous insanity, which condition it also resembles as to etiology, emotional shock, cerebral overstrain, exhausting diseases and excesses being the principal factors responsible for primary confusional insanity The patients suffering from this psychosis, after a rapid rise of their symptoms during a period of incubation rarely exceeding a few days, present hallucinations and delusions of a varied and contradictory character The delusions may resemble those of mania, and more often those of melancholia, but no emotional state is associated with them The patients assert in the same breath that their property has been stolen and that they are going to take part in some State affair There is a surface resemblance between the confusion of mania and that of acute confusional insanity The confusion of mania is not the expression of a genuine confusional state, but of a disparity beween the ideational items and of the word channels through which they seek exit That of acute confusional insanity is an expression of a true essential confusion of ideation "

Several years ago I employed[2] this designation in connection with an analysis of cases occurring in the literature In 1889, in an article clearly suggested by Dr Spitzka's work[3] on insanity, Dr H C Wood[4] used the same term to designate this class of cases Antecedent to Dr Wood, Dr H N Moyer[4] had testified to the existence of certain forms of insanity bearing this designation The term was adopted from Dr Wood by Dr W Osler[4] at this time, who employed it to designate the same class of cases Dr Conolly Norman[5] also employed the term to designate this class of cases, taking it from Spitzka

Three years ago I reiterated an analogy made in 1888 between the psychoses produced by various causes of cerebral exhaustion while classifying them under this title This psychosis has been carefully discussed by Dr J Ferguson, of Toronto, who is somewhat biased by a seeming analogy between typhomania and acute or primary confusional insanity Confusion of the two psychoses is not infrequent, nor is it deserving of reproach, albeit typhomania is a furibund, not an exhaustional psychosis

The features presented by acute or primary confusional insanity may be gleaned from the following case of varied etiology cited from those which have come under my observation

Case 1—A young man brought up on a farm was much given to the perusal of sensational literature He was very superstitious and frequently expressed a fear of ghosts The boys of the neighborhood becoming acquainted with his weakness devised a plan to frighten him with a pretended spectre at midnight He always slept with a large revolver in easy reach During the day the ball cartridges were replaced by blank cartridges and the weapon restored to its usual place At midnight the victim of the practical joke was awakened by a seeming spectre which stealthily entered the room and stood with outstretched arms muttering unintelligibly The victim hurriedly grasped the revolver and sat upright in bed, dumb with fear The ghost advanced a step, the muttering continued When the young man, wrought up to almost a frenzy, drew the weapon and stammered, "If you are a man, I shall kill you, if you are a ghost, this won't hurt you" and fired There was a quick motion of the shrouded arm and the bullet was thrown back striking the headboard A second time he took deliberate aim at the figure and fired Again a motion as if catching the bullet and it was thrown back upon the bed He fired a third, a fourth, and a fifth shot, only to have the bullets hurled back with noiseless motion from the ghostly figure Then for a brief moment he sat as if transfixed, gazing with mute bewilderment, when with a wild shriek of terror he fired the last blank cartridge and hurled the pistol at the ghost When the pretended ghost revealed himself, the victim was found in a dead faint which gave way to an incoherent frenzy, accompanied with marked initial hallucinations of sight and hearing He recovered after three months' treatment in an asylum One of the planners of the joke became insane through remorse and exhibited the like symptoms, but also finally recovered

Case 2—A man 50 years old was admitted in a state of violence much resembling that of alcohol The patient who had a brother insane, had been perfectly well up to a week prior to admission when he was attacked by rheumatism involving the knees, ankles and wrists accompanied by a high fever The third day after the appearance of the fever the patient was exceedingly delirious Home treatment was for a time pursued, but his violent attempts rendered transfer to an asylum necessary On admission the patient had a temperature of 101° His knees, ankles and wrists were swollen Psychically he was incoherently agitated and presented hallucinations of taste, hearing and sight The day after admission his temperature rose to 105°, his agitation increased, he being with difficulty kept in bed, desiring to get up continually and drive off a legion of devils pursuing him He refused to take eggnog on the ground that it tasted and looked like blood Within three days the patient became comparatively rational and by the end of the second week the mental symptoms had entirely disappeared The patient soon began to improve physically and was finally discharged He recovered four weeks after

Case 3—The patient had been in very good health up to about three months before the admission which occurred during the year 1874, when he was attacked by headaches for which, on the supposition of its being malarial, three grains of quinin were prescribed three times a day After taking three doses of this the patient was seized by a violent attack of incoherent frenzy, with marked hallucinations of hearing of a depressing type There was considerable dimness of vision, these phenomena persisted for three months as the quinin was continued and the patient treated with morphine subcutaneously On admission to the insane hospital, which was at length rendered necessary, the patient was in the condition already described and was placed under choral and hyoscyamus as a hypnotic and conium to quiet motor excitement Under this treatment the patient was in fit condition to be discharged within six weeks[6] after admission He manifested, a day previous to discharge, some slight evidences of malaria, whereupon quinin was administered which had the effect of bringing on a fresh attack of frenzy with the same symptoms as previously The quinin was stopped and the same treatment was instituted with equally good results

Case 4—A painter 40 years old became incoherently insane during his third attack of lead colic He felt bees stinging him and saw them fly through the air at him After three weeks home treatment he recovered

Case 5—A girl 6 years old was attacked by scarlet fever, which went through the early stages in the usual way About the sixth day after the scarlet eruption appeared the temperature (104°) sank to 98° and the child became extremely restless and violent She had been frightened by a Chinaman two weeks before the attack of scarlatina She now complained that she saw him at the window with his hands outstretched to grasp her This condition continued for two days when it gave way to an incoherent hallucinatory state, accompanied with great agitation The patient recovered in a week[7]

Case 6—A woman 40 years old, who had been engaged in harassing litigation, was grossly insulted by a lawyer during an interview She wandered away in a stupid state, but was picked up by a friend who took her home She remained in this stupid state for thirty-six hours and then became incoherently hallucinated, visually and auditorially Three weeks later she had fully recovered but retained a very confused recollection of her illness

The phenomena presented by this psychosis bear a superficial resemblance to the episodiac excitement of paranoia as well as to the period of transformation Both are attended by hallucinations and agitation, but in paranoia there is an underlying intellectual element which, together with the precedent history, serves for demarcation The febrile disorders often set up a neurosis which serves secondarily to the acute confusional insanity as a basis for the develop of paranoia Such an association is, however, purely fortuitous Acute disorders may expedite in degenerate subjects the development of paranoia after an acute confusional insanity, but this has no special relation to the succeeding psychosis since paranoia was simply hastened in its development, not created by the confusional insanity This fact, however, led Westphal erroneously to classify acute confusional insanity with paranoia Rosenbach has recently pointed out these resemblances in a very graphic manner The temperature in typhomania and the furibund symptoms differentiate it from acute confusional insanity as well as the greater mental defect Treatment consists in proper nutrition, quiet and relief of agitation The prognosis is usually good

A question has been raised as to the essential etiologic factor Kraepelin,[8] who studied psychoses of this type most extensively, is of the opinion that to systemic nervous exhaustion, not to toxic elements, it is due This is also the opinion of Moeli,[9] who in a case resultant from lead colic, claims that the exhaustion from the colic, not the lead poisoning, was the chief cause of the psychic symptoms Binswanger[10] in discussing the psychosis as it supervenes on fever from brass poisoning in brass founders, inclines to Moeli's opinion

As will be seen by the quotation from Spitzka, he regards the adynamia as the essential basic etiologic factor This opinion of Spitzka has been adopted by Dr H C Wood Ferguson insists that toxic factors play a part in certain cases This may be granted but they, as a rule, produce no symptoms differing from the cases developing on exhaustion from other causes This adynamia is, as many of the older clinicians have shown, simply a nervous asthenia produced by various causes ranging from psychic to toxic On it the whole group of adynamic psychoses designated as primary or acute confusional insanity develops During fourteen years private and insane hospital practice in Chicago, I have observed 103 cases

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SOME QUESTIONS OF RESPONSIBILITY IN OPIUM AND COCAIN INEBRIETY

Read in the Section on Neurology and Medical Jurisprudence at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY T D CROTHERS, M D
SUPERINTENDENT WALNUT LODGE HOSPITAL, HARTFORD, CONN

Within a recent period the question of responsibility and accountability for conduct and acts of persons who are known as opium, cocain and other inebriates has been raised in courts, and referred to medical men to answer The confusing character of the medical evidence offered suggests the need of a more careful study of some of the general facts common to these cases So far, the contested cases have been disputed wills strange criminal assaults, thefts and defalcations, and other crimes usually devoid of premeditation and ordinary judgment in the execution. The larger number of these cases have none of the symptoms of insanity as understood in courts and text-books The prominent manias and delusions and eccentricities of talk and conduct are wanting. The opium cases in public are quiet, secretive, abstract and harmless The cocain takers are talkative and excited, but equally shrinking and retiring The other drug takers also avoid publicity, and when exposed seem dull, stupid and indifferent Many of these persons retain their position in active life, and appear normal, attracting no special attention by acts or words

The commonly accepted opinion, which is supported by many medical men, is that the use of narcotics daily is not incompatable with ordinary intelligence and average judgment, that it is possible to use such drugs for a long time and be mentally capable Such views are not sustained by scientific examination of cases

Practically, all uses of narcotics are the abnormal demands of brain centers for relief Same condition of fatigue, degeneration, and departure from a normal state, is manifested by irritation, pain and suffering this the narcotism of these drugs quiets Later states of poisoning follow, from the derangement of cell nutrition and elimination of waste products, and the increasing chemical disturbance of the higher processes of tissue and cell growth All narcotics by their paralyzing action on the sensitive

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[1] Medical Gazette, 1880

[2] Jour of Nerv and Men Dis Periscope 1881 to 1886, Alienist and Neurologist, 1888-7, Neurological Review, 1886

[3] Insanity Its Classifications, Diagnosis and Treatment

[4] Weekly Medical Review, 1889

[5] Dublin Jour of Med Sc 1890

[6] Jour of Nerv and Men Dis 1881

[7] St Louis Clinical Record, 1881

[8] Archiv f Psych, 1881-6

[9] Charite Annalen 1883

[10] Neurologisches Centralblatt, 1882

nerve centers, both poison, starve and exhaust them, and thus destroy the power of the higher centers to recognize the actual condition and relation of the surroundings

This is practically insanity in its broadest sense The brain is impaired, its delicate functional processes are lowered, its capacity of reasoning and of comparison is broken up, all sensation is deranged, and co-ordination becomes more and more difficult Both theoretically and literally, the highest functional activities of the brain suffer most The lower organic functions of digestion, nutrition and elimination show little sign of derangement in the early stages The effect of a single dose of narcotic drugs is noted in the diminished sensitiveness to all impressions from both external and internal sources The knowledge which sensation brings to the nerve centers is defective and misleading Events and their relation are obscured and the capacity to discriminate is weakened or destroyed

It is the masking and concealing of these derangements that makes them difficult to be understood These drug-inebriates quickly become automatons, following an accustomed line of act and thought, and in this way seldom manifest their real condition Later egatism and delusions become so prominent that the damaged brain is apparent In a practical study of cases where this question of sanity and responsibility is brought into prominence, the facts of heredity, and the mental and physical condition of the person before drugs were used and the effect of those drugs on the mind are the essential facts to start from

The following cases illustrate the influence of heredity in this problem A left a will which was contested He was a business man of excellent judgment and much respected For the past ten years he had used opium No history could be obtained of the reasons for using opium He had been quiet, secretive and reserved all his life, never showing any special interest in his family or friends, and avoiding company unless on business The death of his wife seemed to deepen his secretiveness, for he would see no one but his confidential clerk, and through him execute orders and business transactions The last years of his life he manifested alarm and intense anxiety at the nature and quality of the food served him He would go to the kitchen and question the cook as to the method of preparing the food There have been certain parts of the food especially sent to his table He gave his property to a distant nephew and only a small part to his children The heredity indicated a father who died in an insane asylum, a mother very eccentric who died in childbirth Both grandparents were inebriates and mildly insane Two uncles were epileptics, one aunt an imbecile, and several cousins feeble minded and paranoiacs From this heredity and history, with the unusual act of the will, his irresponsibility was decided

B was before the courts charged with bigamy He came from a degenerate family, marked by hysteria and eccentrity on the female side, and inebriety, epilepsy and imbecility on the male side Both parents were paranoiacs of alternate exaggerated and depressed emotions, in constant conflict with the surroundings and the persons they came in contact with He had been an alcoholic and changed to opium He was a commercial traveler for a brewery, and was feeble minded in many respects The act and his heredity and present condition pointed to irresponsibility, want of control and impaired consciousness of right and wrong

In a study of the physical and mental condition of persons before opium was used, the following are selected as typical cases C, a lawyer who was excessively egotistical and bold at times, then manifested unusual timidity and feebleness of character before the use of opium, became involved in a swindling scheme He had been considered an unreliable enthusiast who joined all new schemes and theories that came up and deserted them as quickly He was credulous, skeptical and suspicious, alternately At one time he was intensely selfish and grasping, at another, he would be very generous and benevolent This instability extended to all his mental and moral activities and became notorious After some fever he began to use opium and became secretive and cautious Delusions of neglect and persecution were followed by dishonest acts and arrest, with conviction and sentence to prison

D was an erratic, passionate merchant who was in constant difficulty with his customers, always having litigation to secure and preserve his rights In his family he was harsh, overbearing and suspicious He manifested constant fear and alarm of being cheated For some unknown reason he became an opium inebriate, and two years later was convicted of incendiarism, burning a neighbor's property to keep it from being occupied by a supposed enemy

In both of these cases the evidence clearly indicated a degree of insanity and degeneration before opium was used The responsibility of both cases was an open question before opium was used, but after, it appeared to be a settled fact How and to what degree the use of opium has broken up normal reason is the next essential inquiry The cases vary so widely it is difficult to point out any particular class of symptoms common to all The following case has attracted much attention

E, an opium taker, proved to be a defaulter of a large amount He had been an ambitious, energetic banker, who for many years overworked and neglected ordinary rules of health He became wealthy, was temperate, honest, lived abstemiously and was considered a man of good judgment and highly respected After a severe attack of the prevailing influenza, he began to use opium A year later he showed marked change in his habits and manner He was dull and stupid and seemed to have confused notions of many things where he was formerly clear and prompt His temper became more irritable, and he was suspicious Unusual fears were manifest to prevent his associates from robbing and taking advantage of the company New books were opened and expert examinations made of accounts, and explanations demanded of all possible matters This sharp espionage was continued for three years, becoming more offensive every year, when a board of directors made an examination of his own accounts finding a large defalcation An attack of acute mania followed the exposure, and later imbecility and death

F was arrested for wrecking a train by placing obstructions on the track He had been for years a reputable mechanic, and from the death of his wife and loss of his property, with illness, became an opium eater He worked for the railroad, and was discharged, then gradually developed delusions of persecution He grew secretive and suspicious and talked to himself when alone He wandered round the country in the daytime, coming in late at night, only working to get sufficient money to purchase opium On the trial he could give no idea of his acts and conduct from the day before the act to two days later, and seemed not to realize the crime of which he was accused

Delusions of injury by others are not uncommon Thus a woman who used opium accused her physician of criminal assault A business man asserted that he had signed a contract by threat and force of a partner, a husband asserted his wife had secreted stocks and bonds, and affirmed they were lost When confined in an asylum, these delusions assumed the form of persecutions and efforts to keep them away and take their property from them

In a medico-legal case, if the fact of using opium is established, it is necessary to make a thorough study of the history of the person The facts of heredity will indicate a constitutional tendency and bias to certain general forms of degeneration The facts of his history, before using opium, points to favoring causes and conditions that would most likely find relief in opium and narcotism The exciting and predisposing causes which led to the first use of opium, and the effects on the conduct and character of the person, with the length of the addiction, are often the central facts of the case Lastly, the act or crime committed, its possible motive, and the circumstances associated with it From these facts the possibility and capacity to think and act sanely may be determined

In all these cases two conditions are present One, alteration of character and conduct, the other of enfeeblement and deficiency The latter may be congenital and the normal state of the person He may be through defect, disease, and other causes, mentally enfeebled and unstable, deficient in judgment and average reason Opium will intensify and increase this condition, which may be far removed from imbecility and dementia, and yet it is clearly degeneration, and the power of recognition and discrimination of the relations of duty, obligation, and adjustment be wanting This condition of lowered intelligence and morality, with reason and judgment below the plane of normal consciousness, is clearly irresponsibility In the former case, where simply alteration of conduct and character are the most prominent symptoms, opium deepens and widens these changes

These are some of the cases which pass unobserved through life, attracting no attention except among those intimate with them When they commit crime, make strange contracts, ignore all claims of duty and obligation, make unreasonable wills, the various questions of mental soundness are raised The use of opium, no matter for what purpose, is clear evidence of degeneration, not when taken at long or irregular intervals, but when used continuously The activities of the brain are reduced and all the higher processes which control and regulate the affairs of life with judgment, prudence and restraint are lowered to an automatic level As a result, such acts manifest this condition more than ideas The gratification of the senses, regardless of consequences, grows more and more dominant Indulgences in so-called pleasures are the leading motives, and considerations of family, laws, society, duty and obligation grow constantly feebler He retrogrades back to lower levels, and yet in this dissolving process he may not have any of the more common signs of insanity and imbecility Courts and legal methods of judgment may be unable to find evidence of irresponsibility, and yet it exists, not based on any class of symptoms, but on a general history and comparison of conduct and character

This region of alteration of character, and the growth of the ego, with increasing feebleness of the higher function, cerebral activities, must be recognized and studied While the case may remain in this state for a long period, it is liable any time to pass into dementia or general paralysis, and the longer opium is used the more pronounced the organic changes become Every case must be judged by itself The question of responsibility is one of degree The use of opium has put the man in an abnormal condition in which his mental faculties are crippled To what extent, and how far he has become disabled and made incompetent to think and act wisely, are the questions The general principles which govern these cases apply to all other narcotic addictions

The physiologic action of cocain resembles alcohol in first exaggerating the mental functions, then depressing them Opium reduces the functional activity of the brain centers and cocain exalts them In one case a form of melancholy follows, in the other, delirium and mania comes on In both, the lowering of the higher brain centers is followed by the rise of the lower egoistic impulses The exaltation from cocain becomes delirium after a time, with cell irritation, fatigue, confusion and exhaustion The depression from this temporary elevation and exaggeration of cell activity demands relief in the repetition of the drug, and after a time organic changes begin, with degeneration and impairment The cocain taker more often commits crime against persons than property Such crime will be fitful, impulsive and lack premeditation and motive The cases that have been contested have been assaults, thefts, and attempted injury of persons without cause Several wills have been disputed where suicide followed the execution of the paper Some cases have been kleptomaniacs, and most of the cocain takers have turned to alcohol and opium for relief Hallucination and delusions are very common, but usually transient and recognizable by the person when the immediate effects of the drug pass off The cocain inebriate will at times manifest a degree of mental clearness and superior judgment that is unusual, but this is simply masked delirium and soon ends in confusion and delusion Ideas and conduct are delusional and transitory, and will not bear the test of examination and comparison General paralysis begins with a period of cocain inebriety, and the treatment and removal of the cocain brings to light this disease Cocain may be taken for some time without recognition in the changed character and habits of the case, but a careful inquiry will show a steady decline and debility of all the higher mental operations

A, a physician who had used cocain secretly for two years, assaulted a stranger in his office It appeared that he was laboring under the delusion that detectives were hunting for evidence against his character B ran away with a large amount of money belonging to the firm he was connected with He was a secret cocain inebriate, and had delusions C, a woman, used cocain and was a notorious kleptomaniac, manifesting cunning and judgment in concealing her real condition

As in opium cases, each one presents different phases and has to be judged by the facts peculiar to it Crimes of such cases often come from concealed hallucinations, particularly of theatening voices The act in its sudden impulsiveness indicates some condition of aural or visual disturbance One very prominent symptom of mental derangement is loquaciousness, and uncertainty and indecisiveness of thought Correspondence never comes to an end, one letter suggests another, and so on indefinitely The same feature is noted in conversation, continuous, random, vague thoughts and opinions, all tinctured with delusions of vigor and strength, and boasting of what they have or can do

The fact that cocain is used medico-legally is presumption of general brain debility and various degrees of irresponsibility In a disputed case, the same thorough history should be obtained of the heredity, previous health and present condition as in opium cases This, in connection with the fact that cocain used continuously rapidly develops mental confusion and intellectual disorders, making it impossible to understand the nature and character of the acts and conduct, would go far toward proving irresponsibility in a given case

A number of drugs have recently come into medico legal medicine in similar questions It may be stated as a general fact that all narcotics or drugs which may possibly cause intoxication are poisons The brain both functionally and in its organic structure is injured, its integrity is impaired Hence any form of drug addiction is open to the suspicion and most reasonable certainty of lowered consciousness of right and wrong, and general incapacity of reason These drugs are taken for their effects, which give relief in most cases Alcohol and opium are the most prominent Cocain, chloral, chloroform, ether, camphor, belladonna and others less prominent are used in the same way The effects are intoxications or states of poisoning in which the brain is exalted, depressed, narcotized and changed, and precipitated into states of partial insanity

The use of these drugs may be a symptom and point to some degeneration and arrested development, attended with irritation and exhaustion for which these drugs bring relief In all cases they have no food element to build up the brain, but by irritation and depression break up and tear down the higher processes of cell and brain activity When such cases come into court and the soundness and unsoundness of certain acts are to be examined, then these general facts appear and form the basis for a wider and more exhaustive study

The medical witness should never try to draw dividing lines as to where mental health and disease join He should assume justly that from certain causes certain effects are always to be expected That continuous use of drugs for their effects is always injurious, and no one can be rational and sound who poisons his brain with narcotics Also, that each case is a law to itself, and from the facts and conditions clear, general conclusions can be affirmed that will bear the test of examination and study Forensically, the question of responsibility determines the measure of punishment, and here the judgment of the physician should be clear, independent and unbiased

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THE POST-ACTIVE TREATMENT OF NARCOTIC HABITUÉS

Read in the Section on Neurology and Medical Jurisprudence at the Forty-sixth Annual Meeting of the American Medical Association at Baltimore, Md , May 7 10, 1895

J B MATTISON, M D
MEDICAL DIRECTOR BROOKLYN HOME FOR HABITUES
BROOKLYN

Very largely among the laity, and, to no small extent, in the profession, an opinion obtains that narcotic inebriety is a cureless disease My experience, covering a quarter century and compassing the history and treatment of many hundred cases, has convinced me that this opinion is a mistaken one, and in two papers, "The Curability of Opium Addiction," *Journal of Inebriety*, 1885, and "The Curability of Narcotic Inebriety," *Cleveland Medical Journal*, 1893, cases were cited in proof

Years ago, the opinion was advanced that 30 per cent of proper cases, properly treated, resulted in permanent recovery I am no less optimistic now than then, and when the value of a certain post-active regime in the treatment of the disease is fully appreciated, and is insisted on and persisted in as its importance demands, my optimism will assume more generous proportions, and a blot on the scutcheon of professional success along this line will be largely removed

It is not surprising that this non-hopeful feeling concerning a continued good getting on after quitting a long-used narcotic should so largely be held The common idea that the habitual user of opium, chloral or cocain is simply the victim of his own vicious indulgence, implies a damaged morale on the part of the patient that militates strongly against any lasting good from a strictly therapeutic endeavor The somatic factor in causation being denied, the crippled condition being deemed due to impaired psychique rather than physique, and these unfortunates being looked upon as moral lepers, who, having knowingly "sown the wind" must "reap the whirlwind," that measure of sympathetic succor which would bring to them what the resources of modern medicine can surely extend is withheld them, and they are given over by their pessimistic commiserators to a bondage binding for life

I have held and still hold that this largely prevalent idea as to the etiology of narcotic inebriety—in the immense majority of patients—among the better class (and I assert and insist upon well-marked class distinction in these cases) is a mistaken one, *vide* "The Ethics of Opium Habitués," two papers, *Brooklyn Medical Journal* and *Medical and Surgical Reporter*, 1888, that a physical necessity, not a moral obliquity, is the great genetic factor, and that a full recognition of this fact, in both active and post-active treatment of this disease is absolutely essential to a large and lasting success And, *en passant*, it is a pleasure to express my belief that the trend of professional opinion is growing along this line, as regards both alcoholism and morphinism, the two forms of inebriety that to-day most menace private and public weal

The advance of scientific medicine during the last half decade, in the treatment of the last named neurosis, has been such as to warrant a statement in 1893 before the Pan-American Medical Congress that, at no previous time had it been so simple, so satisfactory and so successful Enlarged experience has not lessened this opinion, in fact, the modern and humane treatment of the morphin disease, which so specially attaches to the Mattison method, is securing increased and increasing recognition, appreciation and application, all of which I make bold to say—at the risk of being deemed an egotist—the merit of the method unquestionably deserves

But while we have reason to felicitate ourselves on therapeutic progress in this field, touching the question of acute cure we are still face to face with the unsettled, because largely unsuccessful, question of what may be termed chronic cure To the solving of this problem our best effort may well be directed, and it is the purpose of this paper to present certain facts, the outcome of an experience not small, and to commend such details of post-active treatment as will tend in most measure to secure a lasting success

As stated in a paper, "Morphinism in Medical Men," presented this ASSOCIATION last year, the majority of those who honor me with their care belong to our profession As fellow-members of a noble guild it is quite natural that we who have not fallen under the poppy blight should feel a more than common concern in their well-being, and, taking them as a class—though the same danger pertains to most ex-habitués—it may be said that three things imperil the permanence of their cure They are overwork, rum and tobacco

In laying special stress on these, it need scarcely be said that the full repair of all health infractions—brawn or brain—that stood in causative relation to the initial narcotic using, is a *sine qua non* in doing permanent good But granting that full repair, and that nothing remains save the entail of a narcotic abuse, many cases present in which the risk of failure pertains to one or other or all of the three causes cited

Regarding the first of these, overwork, one can easily understand why the varied and exacting demands of an active medical life should make it take first rank among causes effecting an untoward result And in direct ratio to a premature resuming of the doctor's toil, is the peril of his again falling victim to the poppy need

It may seem strange that a medical man, who, above all others, should know the disturbing effect of a long-used narcotic on functional well-being of mind and body, does not appreciate the danger of too soon resuming work Such, however, is the fact Of course, cases occur where, from conditions beyond control, despite a full realization of this risk it must needs be taken, but too often the lack of good judgment in not recognizing the great truth that a nervous system, battered and bruised for years by narcotic excess, will not in as many weeks or months regain its pristine status, is the main reason for failure in the good work—be it never so well begun History has repeated itself so often along this line that I emphasize this danger, and warn against it with all the energy at my command

Alcohol lessens greatly the hope of permanent cure *No ex-narcotic habitué is safe who uses rum in any form* The question of kind or quality—mistakenly held by some—is of no import Pure or impure, beer or brandy, wine or whisky, the risk impends, for it is the alcohol that makes the mischief Years ago that opinion was reached and each year has but added to this belief And this prompts me to say that I think the use of alcoholic stimulants in the active treatment of narcotic inebriety is needless and dangerous Needless, because success can be secured without them, and dangerous—doubly so—because they retard acute recovery and tend to create a need for continued taking which makes much less hopeful the outlook for continuous good getting on I am well aware that the opposite idea, both in active and post-active treatment, is held by some—notably among Germans—but, guided by the lamp of my own experience, I am bound to assert my opinion absolutely and everlastingly

Tobacco endangers recovery This belief, though more recently arrived at, has become just as fixed as that regarding alcohol, so much so, in fact, that no applicant for my care is accepted unless he or she will agree to abandon the weed This, it may be, is counter to the common view, but testimony and observation, reasoning and experience have brought me to this precept and practice

If it be asked why such a radical idea governs my counsel and care in these cases, one broad, general answer is given—this Large and enlarging experience has convinced me, beyond all question, that the use of alcohol and tobacco by convalescents of this class tends, by lowering nerve tone, special and general, to prevent that return to pristine integrity of health which makes it most largely proof against recurrence of a narcotic need

While insisting on the eminent importance of this triple abstaining during the post-active régime, care must be taken to continue all those factors which make for good during the early abstinence time It goes without saying that favoring environment, freedom from worry, care along secretory and excretory lines, and a tonic régime, all play a large part in repairing ravages of narcotic abuse, and must be continued, if need be, for months or years, and when to these are added the special causes that make less vulnerable a post-narcotic state, we shall surely note a lasting betterment in patients' future and in professional good repute

Prospect Place, near Prospect Park

REFLEX NEUROSES

Read in the Section on Neurology and Medical Jurisprudence, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md, May 7-10, 1895

BY JAMES K KING, M D, PH D
MEDICAL SUPERINTENDENT, GLEN SPRINGS SANITARIUM
WATKINS, N Y

The intricate and complex nature of reflex nervous diseases and the difficulties in the way of studying any pathologic changes that may exist, make them the most complicated of any we have to treat The long, patient and exhaustive line of experiments, tending to unfold the reflex nerve phenomena, has thrown much light on this subject You are all familiar with these scientific investigations When we pass from the physiologic to the pathologic field of investigation we find it still more unfruitful in clearing up our doubts, just as all morbid processes are more difficult to unravel than purely physiologic ones

When the reflex stimulation is increased, there is an increase of the peripheral irritation somewhere, but where, is the difficult question to settle Reflex irritation means often an increase in the irritability of the afferent or efferent tract It may mean an increased irritability of the gray matter of the brain or spinal cord, or it may mean that the inhibitory influence of the cerebrum is more or less diminished, or, lastly, it may indicate that the sensory tracts and psychic elements are increased. Frequently, in a still more complex manner, the irritation is transmitted from the sympathetic system to the sensory tracts of the cerebro spinal.

If we study carefully the sympathetic nerves distributed to the pelvic viscera and trace them back to the several ganglia situated at and below the bifurcation of the aorta, following these tracts up the spinal cord and the ramifications to the various organs, we can readily see how intimate and frequent these reflex disturbances are. The urinary and reproductive organs and the rectum are particularly subject to irritations that travel up these sympathetic tracts and cause functional disturbances in other organs. But this is true of all organs and it is not yet possible to understand how an ulcer in the rectum, a contracted cervix, disease in the middle ear or errors of refraction can disturb the stomach, but we know from clinical experience that it is so. We can not yet see how certain abnormal conditions of the stomach and liver, variations beyond our ability to differentiate, can, in one instance, cause pain or intermittent pulse, or palpitation of the heart, at other times a variety of headaches, and at other times psychic phenomena, such as depression and melancholia. We can not explain how anything very cold taken into the stomach will cause a severe lancinating pain in the left side of the head. Perhaps it is due to sudden contraction of the blood vessels excited by reflex action.

Many reflex irritations are beyond our knowledge of the line of reflex phenomena. When I was in the Rotunda Hospital we were in the habit of using hypodermics of ergot to control uterine hemorrhage. The effect was too immediate and pronounced to be due to any absorption and physiologic action of the ergot. We concluded that the effect must be due to reflex irritation. By experiments we found that hypodermics of chloroform or cold water would produce the same results.

The number, extent and variety of reflex nervous disturbances are so great, and the uniformity as to their classification so uncertain, that it seems to me desirable at the beginning of this paper that we define as clearly as possible what nervous diseases properly belong to the class grouped under the heading, "reflex neuroses."

Dr. H. Gradle, of Chicago, has contributed to this society a very valuable paper on the study of reflex neuroses having their origin in abnormalities of the structure of the eye. He has also referred to other reflex disturbances. Many others have aided greatly toward the solution of vexed questions referring to these functional nervous diseases.

There has been and still is entertained, by distinguished neurologists and other special workers, a wide difference of opinion in reference to the nature and extent of reflex nervous phenomena, and as to the propriety of including certain nervous diseases in this class. Among those who have considered that many nervous diseases, including certain forms of hysteria, epilepsy and insanity are due to reflex excitement, we need only mention a few names like those of Brown-Séquard, Sayre, Neiden, Hack, Stevens and others. An opposite opinion has been held, as we are all aware, by able men like Skene, Jaccoud, Romberg, Mitchell, Gray and others. This wide difference of opinion must be due to a want of definiteness of terms and classification, and the results of different experiences in the treatment of diseases. We will be able to clear up some of the difficulties if we make a careful study of the causes of nervous diseases. Malaria, diphtheria, tuberculosis and a long line of diseases are due to a definite cause, a definite germ. Not so with nervous diseases, especially the class we are discussing. Take for instance, the mooted one, epilepsy. It is sometimes due to brain disease, sometimes to brain pressure, sometimes to sensitive cicatrices on the cutaneous surface, sometimes to dyspepsia—more times to causes beyond our ken. We can all bring forward cases to prove that epilepsy has been due to the nerve storms excited by these various causes.

Insanity, with its protean forms of expression, is due to a far greater variety of causes than epilepsy, and is alike difficult to classify. Hysteria, as mysterious and manifold in its causes and expressions, as that weird and popular American disease, neurasthenia, and often associated with it, is subject to the same indefinite laws of classification.

Headaches are due to even a greater variety of causes than any other infirmity we are called upon to treat, frequently reflex and yet by no means always so. We might multiply illustrations indefinitely, but it is not necessary.

Now if we recognize in the first place the law laid down by Wilkes governing functional nervous diseases, much of the diversity of opinion will be cleared up. It is in these words: "Moreover, it is undoubtedly true that there is not a single organic disease of the nervous system which may not be simulated by a functional and curable one."

Now if we recognize in the second place what was indicated in our reference to epilepsy, insanity, hysteria and headaches, viz., that functional nervous diseases are due to a great variety of causes, the line of separation between the different views of neurologists will grow much less distinct. The recognition of these two fundamental facts or laws in the investigation of functional nervous diseases will help us greatly. We are thus enabled to explain how sclerosis, paralysis, locomotor ataxia, etc., also paresis, softening of the brain and various types of insanity have been cured, simply because we have been mistaken in our diagnosis.

When Dr. D. R. Brower was asked what he thought of the success of the man who had cured so many cases of locomotor ataxia, he wisely remarked that he thought he had made a mistake in his diagnosis. A man was sent to me from a neighboring city several years ago, with acute softening of the brain. He recovered and is at work now. How did it happen? That was a mistake in diagnosis.

When we find so much difference of opinion as to the number of nervous diseases that should be included in the class entitled, "reflex neuroses,’ our simplest way to reconcile the discordant elements is to attribute the difficulty to defective diagnosis. Because one man has a case of epilepsy and cures it by correcting some error of refraction in the eyes, or by the removal of a tumor, or by the correction of some serious trouble in the alimentary tract, or by the removal of diseased ovaries or tubes, and thus places it in the class of reflex neuroses, there is no reason to find fault with the next man who has a case of epilepsy not due to any of these troubles, but to some serious central lesion which excludes it from the class of nervous diseases we are considering

It is asserted by some neurologists that hysteria is due to central or psychic origin rather than peripheral or reflex Hysterical manifestations may be due either to organic or functional disease They may be psychic or reflex, central or peripheral in their origin

I had a case under my care several years ago Her trouble was diagnosed by several of the most noted neurologists of Canada and this country as hysteria The diagnosis seemed to me correct She grew gradually worse and after some years died The autopsy proved the trouble to be tubercular meningitis Often there is some point of peripheral irritation, as the uterus, ovaries, rectum, etc *A reflex neurosis is developed* and it takes on an hysterical type A psychic element enters in by association of ideas, all the symptoms are greatly magnified and all the extravagant adjectives in the vocabulary are used to describe the symptoms These cases are purely reflex But we meet with grave cases at times

Last year a case was sent me, with a nurse specially trained for hysterical cases The disease had been diagnosed by four of the best men in New York city and New Jersey as hysteria All the external manifestations were those of hysteria Many of her symptoms, such as vomiting, could be controlled by severe discipline I soon began to notice symptoms that pointed to organic derangement of the bowels Some obstruction manifested itself and I diagnosed the trouble as malignant, counsel agreed with me I sent for her physicians and they agreed Operation revealed the case absolutely hopeless Now this was undoubtedly a case of mistaken diagnosis, as far as the cause was concerned, but the symptoms were those of hysteria

Headaches are, in forty-nine cases out of fifty, due to peripheral origin in the eye, the ear, the stomach, the bowels, the liver, the generative organs or at some other point—a reflex neurosis—a functional disease, but the fiftieth case, some one will be unfortunate enough to have, will be due to and part of some grave lesion as a brain tumor, a depressed internal table resulting from a fall or blow, or organic brain disease Headaches are due to so many reflex irritations that it is often difficult to diagnose them correctly and more difficult sometimes to cure them We often find a headache the result of more than a single reflex irritation A headache may be due to derangement of the stomach and liver, the liver and bowels, the stomach and uterine disturbance, or to any of these and some error in refraction To cure the headache it is necessary to correct all these troubles The success of the physician depends on his ability to locate the point or points from which the reflex irritation starts

One writer attempts to prove that reflex irritations are of very rare occurrence and that uterine and ovarian diseases do not produce, *per se*, reflex neuroses, but do so for instance, by indirectly disturbing nutrition and that in turn produces headache and other nervous disturbances Clinical experience every day disproves this untenable theory

Three years ago I had a most interesting and instructive case sent me from the East, a lady who had suffered from violent neuralgic headaches which had been gradually growing worse for years, until large doses of stimulants and narcotics were the only source of relief She was 55 years old All approved remedies, local applications, hygienic methods and general tonics were tried for six months At the end of this period the headaches, notwithstanding her general health was much improved, were no better but rather worse The case seemed almost hopeless She had quite a deep unilateral cervical laceration, but as she had passed the climacteric there seemed little to be gained from any operative interference Having exhausted all other means likely to afford relief, I determined to try this last chance The operation was done with great care in the adaptation of the opposing surfaces Union was perfect Two weeks after the operation she began to improve There were few interruptions in the progress of the case. The *headaches disappeared, the sleep returned, she gained* all the flesh she had lost and the restless nervousness entirely disappeared This was undoubtedly a reflex headache—a reflex neurosis I might quote from my case-book a number of similar cases, but this will suffice to illustrate this variety of reflex irritation

Nutritive disturbances are often due directly to reflex disturbances I remember a case sent to me by a physician in Cincinnati She was 38 years old, quite regular in all her functions, but was suffering from anemia and neurasthenia, the latter dependent on the defective nutrition I tried for three months to improve her general health, her nutrition, and build up her nervous system At the end of this time I could not see much improvement The only symptom she had of any uterine disturbance was a slight non-irritating leucorrhea I had spoken of an examination before, but she refused, and as there was so little indication of any disease I did not think it important to insist upon it The slight leucorrhea could be entirely accounted for by her weakened condition I determined now to know the exact nature of the trouble I found an extensive erosion, such as would formerly have been termed ulceration, covering the entire cervix, associated with endometritis The uterine canal was three and one-half inches long She was put upon appropriate treatment and the stomach symptoms were soon corrected She improved in flesh and color rapidly and the nervous symptoms disappeared This was not a case of nervous dyspepsia as had been supposed, but a case of reflex neurosis

Chorea is a Reflex Neurosis —In chorea we find many cases due to embolism of the corpus striatum or thalamus opticus, and other serious lesions, and yet every practitioner knows that many cases—the majority of cases—of chorea from their onset and sudden disappearance are purely functional Dr H C Wood has made it very clear, by showing that the majority of cases are at first functional and due to some reflex irritation, as nutritive changes, and are cured in this stage, but if they continue there is a change of structure and they become organic diseases Clinical experience is rich in illustration of these cases Dr Osler does not agree, as I am aware, with these views

Reflex Cardiac Neuroses —The everyday reflex disturbances of the heart, arising from the stomach and other organs, are too familiar to refer to These reflex irritations may increase in severity until they simulate one of the most painful and serious diseases of the heart, or, in fact, of the body I will only recite one case to illustrate this statement

Not long ago a lady was sent to me from central

New York with the diagnosis of angina pectoris She was 32 years of age and the mother of three children The youngest child was 3 years old The trouble with the heart had existed for one year, but had only been severe for two months, and the attacks had become more frequent also She had been seen by a number of the best New York physicians and all pronounced it a very grave case and liable to terminate fatally at any time After considerable correspondence she came with her family physician That night she had one of her paroxysms and we all thought she would die before morning, sedatives and stimulants tided her over this attack After a few days of rest and quiet, I began to consider the question of treatment She had had the most skilful and scientific treatment Nothing was to be expected from remedies, so I tried to see what I could find that might prove to be a source of irritation She had several rectal fissures and a good deal of tenderness—there was a deep bilateral laceration of the cervix and the perineum was torn back of the sphincter ani I felt hopeful that the correction of these conditions might prove beneficial

As soon as she was in a reasonbly good condition, which was not until she had passed through three attacks in each of which we expected she would die, the plastic surgery was done on the cervix and soon after she began to improve She had several lighter paroxysms but no severe ones The next step was to repair the perineum and correct the trouble with the rectum After these were done she had no more attacks, but made an excellent recovery

Hysteria a Reflex Neurosis—I have referred to this subject in a general way Two years ago a gentleman came under my care who had been distressingly ill for six years He had been seen by many physicians in Europe and later in this country He suffered with agonizing pains in his stomach and shoulders For these pains and the wretched nervousness he had been given anodynes freely All the physicians who saw him pronounced his trouble hysteria These paroxysms of pain and nervousness would come on and grow more and more severe for from twelve to twenty-four hours, when morphin and hot applications would quiet them His family had become quite estranged from all sympathetic relations, because they felt that these were hysterical manifestations and might be controlled I could find no pathologic derangement except in the rectum There I found several ulcers and fissures and marked prolapsus I corrected these troubles and in about three weeks he was greatly improved and slept well I kept him on a hygienic course of treatment for two months and he entirely recovered

Insanity as a Reflex Neurosis—I have had so many cases of insanity in the last ten years, illustrating the influence of reflex irritation producing these mental disturbances, that it is not easy to make a brief selection I have thought well to draw from other sources also, to give more emphasis to these assertions

Dr Frank Churchill reports an interesting case in New York of hystero-neurosis and melancholia, cured by trachelorrhaphy

Dr Sprattling, of New Jersey, reports a case of rare and unusual interest, showing the dependence of nervous and mental symptoms on the condition of the other organs

A patient 28 years old, suffering from hallucinations of a violent type A large quantity of *débris* was removed from one ear of which he complained a good deal The patient soon after entirely recovered his health and remained free from the hallucinations

Some years ago I had a case of melancholia with delusions, due to a contracted cervical canal Dilatation cured the delusions

In the *Medical Record* May 2, 1891, Lawson Tait reports a case of periodic insanity with marked homicidal tendency, cured by the removal of the ovaries and tubes

Drs Jewell and Mosher report cases of insanity cured by the removal of impacted feces I have had similar cases

In 1889 I had a case sent me from New York suffering from melancholia The patient was 43 years of age and had been complaining for some time She had been in the care of two excellent gynecologists and was in good condition in this respect, with the exception of a small bilateral laceration of the cervix I advised douches and paid no more attention to this trouble She was kept on a course of hygienic treatment, and all remedies and appliances that would correct the digestion, improve the circulation, tone up the system and contribute to the improvement of the mental condition were employed Every method and plan of treatment I could devise, with the assistance of good counsel, proved ineffectual, and at the end of two years of treatment she was better in general health, but the melancholia had assumed a severer type and she was delirious and was developing a suicidal tendency Having tried everything else, I determined to repair the lacerated cervix, notwithstanding several of our most noted gynecologists said that it produced no reflex symptoms After considerable consultation I did a trachelorrhaphy with unusual care in adaptation She was so wild that it was impossible to keep her still, but we got a fine union and within three weeks we began to see an improvement in the mental symptoms The patient entirely recovered and is well to day This, gentlemen, was a case of reflex neurosis

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EARLY RECOGNITION AND MANAGEMENT OF THE MENTALLY DISTURBED

Read in the Section on Neurology and Medical Jurisprudence, at the Forty sixth Annual Meeting of the American Medical Association held at Baltimore Md May 7 10 1895

BY W S WATSON, M D
RIVERVIEW HOME SANITARIUM, FISHKILL-ON HUDSON
NEW YORK

Nothing has so much tended to confuse, distort and implant the supposed need of harshness in the management of the insane as our forgetfulness of the infirmities of the human mind It was assumed that a broad and unmistakable line of separation marked the difference between the sane and the insane, that detection was, therefore, a matter of ease, while the facts are that a mere mist, a veil separates, and a something that is easily broken through There is a certain tendency to disorder incident to every mind as regards strength, harmony and development

Do not the eccentricities, the proneness to vice and crime, the indulgence of the passions, the weaknesses of life demonstrate the inherent tendency to mental disorders? As our body is diversified with counterbalancing functions, and in its delicacy and completeness of arrangement is constantly liable to disease and in fact engenders within itself the elements of disease, vastly greater is the mind likely to be diseased, poised as it is in a sensitive balance and more complex in its structure We know that insanity is a disease due to some abnormal condition of the brain The causes are various, and it is practically impossible to give a definition that will embrace all the phenomena

A well-balanced mind is like a sound body, in health we hardly realize that we have a heart, a stomach or liver It is thus with our minds if all goes well and our brain is healthy, our thoughts go out and we scarcely realize that we have a mind until there comes into our lives some disturbing element, some cause for excessive thought, a something that gives us mental pain—we may, ere we know it, realize that we have mental disease It is difficult to recognize the borderland, to fix the line between sanity and insanity, between health and disease, since they so intimately blend into each other Before the grosser lesions of well-marked insanity there are often defects in nutrition long before structural changes take place The time when the most good can be done is during the nutritive disturbances which precede structural or organic changes

As to the actual curability of the insane but little can be said, therefore, it is all important that active measures be taken before a well-defined mental break-up takes place The brain, the controlling center, is subject to exhausting influences to a much greater extent than any other organ of the body An overtaxed brain does not recuperate so readily as other organs to perform its functions, but if from any cause or strain sleep does not follow, rapid exhaustion succeeds, together with hyperemia

Brain-cell nutrition takes place principally during sleep Anything that interferes with proper periods of rest and sleep directly interferes with the nutritive plasma passing from the vessels to the cells and derangement of the intimate connections between the nervous and vascular systems will ensue, producing grave disturbances of the nervous system, which are followed, sooner or later, by insanity We shall not attempt to go into any description of the elementary disturbances or morbid processes, as these are matters treated of in our text-books on psychologic medicines, and such description would extend this paper far beyond its intended scope

Our object is to urge upon the profession the early recognition and repression of the initial symptoms, believing that thousands are needlessly declared to be insane annually and thus are placed under restraint in our asylums without due regard to the type or degree of mental disturbance

It is lamentably true that an asylum is regarded as a necessity to any and every one becoming wholly, or in part, deprived of reason, a public feeling which is largely due to a belief that asylum physicians only are qualified to understand and care for this unfortunate class While we thoroughly believe in our insane asylums and of there being a public necessity for the detention and care of the violent class, we do not believe it is necessary nor is it proper to hurry off to an asylum and associate a slightly disturbed individual, a case of melancholia or reasoning mania, with the worst types of insanity where all is repulsive What can be more humiliating to a man who has any intelligence left than to be made subservient to an ignorant attendant and his abuses, a condition that does and always will exist, to a greater or less extent, where hundreds are congregated together With all due respect to asylum physicians, many of whom are able men and well qualified for the work assigned them, to insinuate that no others are fitted by other mental training for the recognition of the early symptoms of insanity is erroneous and a palpable wrong, kept alive by a few for their own aggrandizement Many of the most eminent alienists of modern times were never connected in a professional way with an insane asylum Who has done more to advance the interests of the insane than Dr Rush? Griesinger, once a leading authority the world over, was never a physician to an insane asylum, nor was Clymer, Seguin, Spitzka, Beard, Mitchel, Jewell and many others of equal renown and assiduous as workers

There is nothing mysterious or especially obscure about diseased conditions of the brain that require asylum observation only We recognize the fact that our asylums afford exceptional opportunities for the study of the degenerate types, while we concede this much, we are confident that the general practitioner and the specialist outside of the asylum are the ones who are called upon to intercept and save from the madhouse It is to them that people go to for advice and it is their duty to do the best possible thing at the earliest possible moment, yea, when the first symptom shows itself We believe it an injustice and deleterious to mild forms of mental disturbances, cases capable of reasoning logically regarding the everyday affairs of life, those yet capable of controlling themselves, slightly melancholic cases, acute mania, restricted monomania, hypochondriacs, all of which fare much better outside of asylums than in them, as a rule

We do not want to be understood as favoring no treatment or watching of such types, on the contrary, we favor the most active measures, such as can only be secured in private homes and institutions, and the placing of these persons among sensible people for companionship, with refined educated persons for attendants

The association of a partially insane person, day after day, month after month, with others similarly or worse afflicted, restrained from contact with people of well-balanced minds, is fraught with no possible good Any medical man having had to do with the mentally disturbed, knows that a very large proportion of such cases have physical ailments that are exciting causes, which only need the practical attention of one conversant with such conditions, one skilled more or less in mental aberrations and their causes, pathologic conditions, etc

We believe it is the province of medical science to arrest in the incipient stage many brain disorders, heretofore considered incurable, with the aid of modern methods if attention is early given

Disordered function surely means organic destruction sooner or later Fully 80 per cent of the insane cases may be cured if treated early and properly, while scarcely 15 per cent committed to the great asylums of our land recover

We have said that the brain is peculiarly liable to disorder through disturbance of circulation, in cerebral inflammation, there is first observed an unnatural exaltation of nervous force with intolerance of light and sounds, a general hyperemia and the capillaries are filled, we may also have a general or local hyperemia of a vasomotor origin from prolonged mental work or excessive tension of an emotional character, gastro intestinal or pressure from disease of the blood vessels themselves or an encroachment upon them by morbid growths, etc What are the indications? What will follow if active measures are not taken? First, the congested condition—the hyperemia of the brain must be relieved and promptly, if we hope to keep our patient from the madhouse or from general paresis Long continued congestion will, sooner or later, produce organic changes, if there be any physical or mechanical reason for the unequal circulation, as gastro intestinal sluggishness, we would begin by giving a free mercurial purge, one that will unload the primæ viæ, it is not at all an uncommon thing to find a large amount of accumulations and in character of the worst We have had cases where it would seem that there had not been a free evacuation possibly in weeks, in which cases enemas and purgatives have been given for days, with copious discharges of the most offensive character possible, after the purgatives have been continued until from the character of the evacuation we were sure it had not been long retained or was poisonous, there has been a marked change in the patient following immediately these thorough unloadings, in many instances there would seem to be little or no mental disturbances left Then, again, it is highly important that we eliminate the excess of uric acid from the system

A lithemic condition is an important factor in many of the mentally disturbed, in fact, in nearly all cases there is lithemia If the hyperemia be due to prolonged overwork or business cares it must be stopped at once, and such means used as will procure rest and act upon the weakened vessels of the brain When the blood-vessels of the brain become dilated, there is a loss of tonicity For such weakened conditions we have in electricity almost a certain means of restoring tone to the vessels, thereby improving the nutritive conditions, the constant or galvanic current is the one used, and in mild doses, applying the positive pole by means of a crown electrode over a well moistened towel that has been wrapped about the head, the negative sponge electrode to the epigastric region or under the two feet, using 3 or 4 milliampères, with an occasional interruption of current, we believe is the best possible means We would also give ergot in moderate sized doses daily, with the expectation of aiding the electricity in overcoming the dilatation of the blood-vessels from its well known powers over such conditions If the congestive conditions are dependent upon a purely mental condition, one of nerve strain, of tension from worry or fixed ideas, it is all important that the mind be put at ease and the brain have rest

It is well known that the influence of the mind upon the body is wonderful for good or bad, as the case may be, in health, it may exalt functional conditions or suspend them, the mind is all-powerful over the nervous system and may excite or depress, may stimulate or paralyze the processes of nutrition or secretion even unto death, and in disease, the mind may restore funtions, enervate the vasomotor and sensory nerves, thus throwing off disease

Sir John Forbes gave it as his opinion long ago, that the curative powers of nature were sufficient to explain all the triumphs of homeopathy We believe that more may be added, it is not to the curative powers of nature alone that the triumphs of homeopathy may be ascribed, but rather that of suggestive therapeutics, with like certainty may the so called miraculous healings be placed to the credit of psychic influence rather than any supernatural power No one disputes that the everyday physician's manner and mode of addressing his patients inspires confidence and has a great deal to do with the recovery many times

The celebrated Dr Rush gives testimony to the value of inspiring confidence, and often attributed the cure to vigorous concurrence of the will with the action of the drug used The power of the will in resisting disease, aside from the influence of imagination or concentration of the mind is unquestionable Since this is a recognized fact in medicine, are we not called upon as physicians and philanthropists to get control of the mind to such a degree as to carry it in the right direction if we can To do so we must raise psycho therapeutics to the plane of a fixed science, to do this a thorough test must be made of the laws and conditions governing the phenomena which heretofore has been enshrouded in obscurity, the hostility and indifference to investigation and acceptance by the medical profession generally is a difficulty to be overcome and will only be overcome by the presentation of facts

Not only is the prejudice of the medical profession to be overcome, but also the peculiar whims of the laity, as there is an opinion current that one part of the human family is subject to the other, that we are likely at any moment, unawares, to be hypnotized and brought under the evil influence of even the most debased The general public has enough information or misinformation regarding the phenomena of the so called hypnotism, that in reality it knows nothing and has its mind filled with imaginations as to the great and dreadful possibilities of one in possession of the power to hypnotize Thousands are worked up to the belief that all the wrongs of life are due to the evil influence of some one, the influence that somebody has over them, and if they commit an evil deed that they are not responsible, or that some one else should be held responsible for their acts, husbands accuse their wives of being under the power of some one, the wife claims that so and-so has her husband under control, even some of our courts have ruled in favor of this mysterious influence, setting as they have the minds of the general public aflame This belief has, indeed, assumed very serious proportions We read almost daily of some dreadful deed having been committed while under some external influence We feel warranted in saying that there is not a word of truth in the claims of these people—persons who assume to ascribe their wrong deeds to the mysterious power of somebody else We do feel that the medical profession is called upon to set the minds of the people at rest by placing hypnotism where it belongs—in the hands of the medical profession only That there is much good to come from this psychic influence there is, we think, no longer room for doubt, as regards harm, that will be just in proportion to the intelligence that goes with it Let the people be educated to know that there is no hypnosis without acquiescence or cooperation, then will the idea of evil influence subside and claims of that character will cease Public exhibitions of hypnotism should not be tolerated, lay papers should have nothing to do with disseminating the false impressions that have brought distress and ruin to hundreds. Stringent legislation against public exhibitions should be enforced. It is unquestionably true that psychotherapeutics provide a means by which a change of condition and many times a cure can be effected, and that its best field of action is diseases of the nervous system, before organic changes have taken place. Hypnotism is effective in disturbances due to imagination, fixed notions; it is a well-known fact that long and continuous thought is ruinous. If we have in hypnotism a means of directing the mind into healthful channels, away from worry, we are justifiable in bringing it into practical use even though it may be true that only a small proportion of persons are susceptible; and notwithstanding there may be possible danger attending the use of this agent, danger is common to many others. If we were to discard from our therapeutics everything that can be dangerous to life, we would have but little that is good left. Our personal experience is too limited to be of real value as to the weakening effect that hypnosis may have upon the mind of the hypnotized. We do believe that such fears are unfounded; we have read the works of most of the ablest writes, those who have treated thousands of cases, in which they do not report a single instance of harm to the mind or nervous system. We do believe, and yet it is inexplainable, that the hypnotizer subjects himself to the loss of some vitalizing principle in the process of hypnotizing that exhausts more or less rapidly. We have, after spending an hour or more and when with two or more persons, felt decidedly exhausted, and when continued for weeks it was attended with loss of energy and followed by insomnia; hence we believe the danger attending the use of hypnotism is principally to the operator.

SOME NON-MEDICINAL SUGGESTIONS IN THE THERAPEUTICS OF EPILEPSY.

Read in the Section on Neurology and Medical Jurisprudence at the Forty-sixth Annual Meeting of the American Medical Association at Baltimore, Md., May 7-10, 1895.

BY S. J. FORT, M.D.

ELLICOTT CITY, MD.

Interest in the manner of how not to give medicine in the treatment of disease is daily increasing, and there is, probably, no domain of morbid condition to which human nature has fallen heir that repays non-medicinal medicine more rapidly and well than the so-called diseases of the nervous system, and while epilepsy may perhaps not be a disease pure and simple, for convenience of discussion, it may still remain under that caption.

It may be well to state also, that all medicine must not be condemned because in the past the stomachs of our forefathers or even nearer relations, perhaps those bearing the names which appear upon our own visiting lists, have been dosed *ad nauseam* with the long list of drugs in our pharmacopœia; this is no reason for throwing aside these valuable aids to nature's recovery; it is simply an argument for a more thorough diagnosis, a more intimate acquaintance with pathologic conditions, and a more consistent belief in nature herself and the patent indications for remedies outside of lists of drugs.

I have been more and more forcibly impressed with the advantage of several therapeutic resources not usually mentioned by modern authors who have written upon epilepsy, in the treatment of this disease. I wish I could begin my suggestions by citing a long list of cures, but you are all familiar with the general intractable condition of the disease and, I take it, are here with the idea of combining our present knowledge of its treatment, and, if not curing at least alleviating, in a greater measure, the many poor sufferers from the spasm proper and the still further awful depredations upon the mentality.

First, I would place in importance the sanitarium, asylum, colony or whatever plan will isolate the patient from the outside world and place him or her in a microcosm of their own, *sans* temptations, and where the physician will be the inspiring genius. I do not believe that any case of epilepsy, be it *petit* or *grand mal*, can be successfully treated when the patient is at home, because medicine alone will effect but few cures, and a rational home where a rational modern scheme of treatment of epilepsy can be pursued is as rare as an egg of the great auk. This is not alone from the fact that few homes have gymnasiums, bathing facilities and hygienic surroundings; the entire atmosphere and environment of the epileptic must be changed; he must be brought under a systematic life, the better to combat the irregular nerve explosions; in other words, he must undergo a species of training something similar to that of the athlete, with one difference, that it must be lifelong with the epileptic.

Arguments from a utilitarian standpoint might be adduced to show why the epileptic should be isolated from the world, but this paper has to deal simply with the fact from a therapeutic standpoint; a standpoint which says that it is best for the patient to be thus brought under the direct control of his physician, which will give him a greater chance of recovery, and if not recovery, a mitigation of the spasms and at least hold stationary what modicum of mentality the patient may have. The ideal home of the epileptic must be equipped with a gymnasium and a system of baths, especially the so-called "rain bath" which is perhaps the best and only one needed; the value of the Turkish or Russian baths has not yet been worked out. Next in importance as additional resources are methods of employment, such as all the light trades, broom and brush making, carpet weaving, basket making, shoe making, mattress making, wire working, etc., beside, if possible, the manifold duties of the farm. An epileptic who is interested and employed will have fewer spasms, all things being equal, than an unemployed case whose time is principally taken up in contemplation of his unfortunate and well-nigh hopeless condition, albeit, he may be under medicinal treatment, and the former case will suffer less from his spasms than will the latter.

While not claiming originality in the above suggestions, it appears to me that the truths of the propositions laid down so far, merit the earnest attention not only of this Section but of the entire ASSOCIATION; that an earnest and combined effort may be made in behalf of the establishment of more colonies like those of New York, Ohio and Illinois. That every State must eventually assume charge of its epileptics, certainly its poor, is I think incontrovertible and the sooner the better. To return—the next important resource is not altogether non-therapeutic, inasmuch as some materia medicas have now a chapter or two on food, and very much can be done for the epileptic by carefully mapping out for him his daily bread and butter Nearly every epileptic who comes under the observation of the sanitarium or asylum officer is gross in proportion and appearance, and will be found to have a voracious appetite, or, if the appetite is capricious, it is made so by the foul condition of his alimentary tract, and the careful pampering of his abnormal appetite by his guardians, "the poor fellow wants it, and he ought to have it because he has so little enjoyment," a fallacious but extremely powerful argument so long as the patient is at home

Coincident with regularity in evacuations of the bowels and free flushings of the kidneys, is noticed a striking diminution in the frequency and severity of the spasms, and with the disappearance of the unhealthy development of adipose tissue and the general clearing up of the symptoms of over feeding, is seen usually a brightening up mentally and all this without the use of bromids or other medicines beside cathartics and the free use of water, internally and externally

In formulating the diet of our epileptic patients we have to consider those of different age and those of different habits I think, if it is possible to oversee the bill of fare, week in and week out, for years at a time, there are many epileptics who may be permitted nearly everything that any one else eats, excluding only such articles of food as are known to be indigestible and guarding most carefully against overfeeding We shall meet some cases who can not eat certain articles of food without danger of a spasm —for instance, I have under my care a child nearly 13 years old who has not had a spasm for more than a year, yet if she should eat a teaspoonful of common beans, no matter how well cooked, it would, I am sure, precipitate one or more convulsions, in this case there seems to be a personal idiosyncrasy in regard to this vegetable, though a sudden fright as an external agent has induced a severe fit in the same child There are some epileptics who can not take milk in any form, some who do not like acids, but as a rule their appetites are fully up to the standard and their desires gauged only by their opportunity to crowd food down their throats Be it understood that I am speaking of epileptics who are more or less defective mentally

In dieting the epileptic, the first point to be considered is *regularity* Such patients, at home, if afflicted with so called good appetites, are allowed to feed at will, and I must say the ease with which they can swallow enormous amounts of food and pass it on through their intestinal tract without apparent suffering or injury is marvelous That an overloaded stomach will bring on a fit or fits is, I think, unquestionable, and the stomach to which additional supplies are being made at short intervals is in an even worse condition than the stomach simply overloaded, for when digestion ceases, fermentation and decomposition begin and the irritation increases proportionately We are dealing with patients who may never have known restraint upon their desires, for them we make a stringent rule—nothing to eat except at meal time

Another point is, eating properly It is said that Gladstone gave every mouthful thirty two bites before swallowing the bolus, and while this is all very well for those who will do it, it would be an impossibility to insist upon such a plan with our patients They may, however, by constant and careful attention, be trained to eat slowly, chew their food thoroughly and properly and use their knife and fork in a manner acceptable in polite society

Some have a very disagreeable habit of using their incisor teeth as molars, and much time is taken up in teaching them to roll the bolus of food from side to side and use the back teeth to disintegrate the mass and thus thoroughly mix it with the saliva before it is swallowed

It should not be difficult to understand the condition of a stomach into which the material of a meal has been introduced in lumps and almost solid masses, the mixture of an ordinary meal is bad enough, without giving the stomach the additional duty of chewing the food as well as digesting it, it is also an easy task to demonstrate the subsequent irritation of the above condition upon sensitive nerve masses, only needing a slight inducement to explode in a wild outbreak of nerve energy, as well as the future results upon the stomach itself and the general nutrition, and further argument for table decorum is unnecessary

Quantity is an important consideration when it is known that those who eat are not capable of measuring the limit of their desire for food by any reasonable standard Those whose temperament and ability permit them to take active exercise or engage in regular work which calls for an expenditure of muscular force, naturally need more food either in quantity or quality than those who are feeble, or those who by reason of their mental obliquity are disinclined to exert themselves The boys and girls who are approaching puberty, whose physiques are in that transition period between childhood and womanhood or manhood, need more proportionately than the older persons who have attained their full physical growth

Sir Henry Thompson[1] speaks of that period of youth "when the whole system abounds in vigor and strength, much superfluous food may be disposed of —first, by the greater activity of the functions of digestion and absorption, and secondly, by the capacity youth possesses for excessive muscular exercise, by which it can use up and eliminate such excess almost at will" While, however, the system of youth can overcome the effects of overplus, for a time, there must come a time when the relation between the "income" and the "output" must be maintained with care or the many and varied evils of overfeeding begin to show themselves

It will be found an easier task to keep the average man nearer the normal, under a regular and somewhat limited diet, than to maintain a close average of health upon an irregular and unlimited diet

The quality of the food bears a distinct relation to the value of the diet Not in the sense of the cost price, for that varies with the condition of the market and the amount purchased, while to the institution which raises its own supplies the cost is reduced to a minimum But food has certain values reckoned upon its chemistry It may be divided into—

1 Organic Nitrogenous (*a*) albuminates Non nitrogenous (*a*) fat, (*b*) carbohydrates

2 Inorganic Mineral (*a*) mineral,

It is a proper proportion of organic and inorganic, nitrogenous and mineral, albuminates, fats and carbohydrates supplied to the organism that enables metabolism or assimilation to take place, the term metabolism also refers to that power which the animal organism possesses of accumulating from its food supplies a store of potential energy, which it afterward transforms into kinetic energy or muscular work and heat, it also takes into consideration the excretory products resulting from the changes which have to be eliminated through the organs provided for that purpose

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[1] Diet in Relation to Age and Activity

Equilibrium of metabolism means that the bodily income and expenditures are balanced, that while the normal physiologic conditions are maintained, there is exactly the same amount of new material absorbed and assimilated as there is of effete matter, the product of the retrogressive tissue changes removed by the organs of excretion, the destruction of tissue is exactly compensated by the formation of new tissue While the body is growing rapidly there is greatly increased formation in the parts participating in the rapid growth, and the metabolism in these parts is correspondingly increased, on the other hand, during senile decay the expenditure is in excess and the body in consequence wastes The physiologic equilibrium is practically determined by weighing and observing that the body remains of the normal weight with a given diet

In working out any problem with the defective class in question it is not easy to determine a standard, the variations in weight and height for the same age being only limited by the number of individuals weighed and measured, it is therefore hardly fair to draw more than tentative conclusions from data made up from comparison with normal individuals of the same age

Curiously enough, very few of the authorities pay much attention to the question of diet when writing of epilepsy Nearly all coincide with the opinion that meat is hurtful, and push this forward with some emphasis Hare, whose monograph upon the pathology and treatment of epilepsy is one of the most thorough and comprehensive upon that subject ever published, claims that very little has been done in the way of observing the effects of diet upon any large number of patients He mentions a report of twenty-four cases, twelve being placed upon a purely vegetable diet, twelve upon a purely nitrogenous diet, for a period of two months, with a result that the vegetarians had a few less spasms than the others, but the difference was so slight as to be of almost no weight in determining the question

I, myself, have been unable to put more than a limited number under observation, the six cases of my own were all chronic cases, in which the possibility of cure had been abandoned, and we only endeavored to reduce the number of spasms to the minimum and keep the general conditions of each as close to the normal as possible Each one was taking 60 grains of potass brom daily in four doses For six months meat was eliminated from their diet, a full regimen of vegetables, cereals and fruits, with brown, white and corn-bread without eggs being given, meat, eggs and milk were then added to the list for another period of six months, careful attention being given every month to the weight, and any variation below that of a preceding month being met by an additional portion of fat-making food Comparisons between the number of spasms for each month of one period and the corresponding month of the other, and the totals of the two periods, gave decidedly negative results, though the average of the six months of vegetable diet was slightly lower than that of the more general diet The variation in number of spasms was, however, only that which may be seen in any number of chronic cases under close observation

Further observation has led me to believe that in such old cases, *diet* has only a subordinate effect upon the fits, and it would seem that so long as care is taken to eliminate any article of food known to be indigestible and to prevent overfeeding, a good, generous and varied bill of fare is the best In cases where the general health is good, a diet very similar to that prescribed for athletes under training is advisable, for the growing child a fat and blood-forming dietary, and for the elderly and apathetic the most simple and easily digested articles Monthly comparisons of weights will show losses and gains, and thus permit any necessary change in the amount or nutritive value of the food

There seems to be much misunderstanding as to what a generous diet means The parents of our epileptics so many times protest that their child is kept upon the plainest possible diet, investigation showing the statement in some instances to be correct, but the patient is permitted to eat *all that he will*, under a very mistaken idea that because he wants it, his wants are actual needs, in other instances the so called plain diet is perhaps not a series of dishes fit to be set before a king, but really a rich and highly-spiced bill of fare, entirely unsuitable to a stomach which must not be overburdened, no matter what its capacity Other parents condemn a diet which, as they say, prohibits cake, candy, pastry and unripe fruit, or fruit known to be indigestible, and say that their poor child has so few pleasures in life, it is a pity to deny him such things, The taste for sugar is no doubt physiological and should be gratified but candy may be given judiciously just as well as a dessert, as to permit the child to eat it at any or all times So with fruit, though to my mind the swallowed pulp of oranges and half-chewed bits of banana have been responsible for many a convulsion, and such pleasures are surely a mistake if we are to obtain a cure

Unless combined with a certain amount of exercise, diet is of an uncertain value, that is the amount of food ingested to preserve the physiologic equilibrium of metabolism, must be modified Parkes says of exercise "A perfect state of health implies that every organ has its due share of exercise If this is deficient nutrition suffers, the organs lessen in size and eventually degenerate more or less" In common with his more fortunate brother imbecile, who is not afflicted with epilepsy, the epileptic defective is more or less imperfectly developed physically, narrow chests, drooping shoulders and ill-developed muscles so frequently complicated with paralytic deformities are very common

Very little can be done with the shriveled, useless, paralyzed extremities, though I have seen much improvement in some cases, where the muscles had not atrophied, from properly directed exercise, especially in the lower extremities from the use of a tricycle

Dr Graeme M Hammond, of New York, in a recent number of the *Journal of Mental and Nervous Diseases*, has a very interesting article upon the bicycle in treatment of nervous diseases, in which he cites thirteen cases particularly benefited by riding a wheel under direction In this connection, Hammond says of exercise "Exercise, when prescribed for nervous affections, should preferably be taken out of doors It must be combined with pleasure and should be prescribed not only with a view of strengthening the muscles, but also for its effect upon the mind The effect upon the mind is often of greater importance than the effect upon the body The feeding of the mind on self, and the continual mental introspection which is so common in neurasthenia, hysteria and hypochondria, should be combatted by prescribing an exercise which necessitates the pleasurable concentration of the mind on what is being done, something which demands a certain amount of skill for its successful accomplishment and which must therefore divert the thoughts from morbid channels, stimulate the mental faculties in a normal direction and engender a feeling of brain-rest and mental refreshment"

The value of exercise as pointed out by Dr Hammond in benefiting certain forms of nervous disease not complicated with spasms is equally marked in the treatment of epilepsy, though the method of exercising must be modified, or rather adapted, to a disease which manifests itself by throwing the victim out of his equilibrium All varieties of exercise where the patient's life or limbs will be endangered must be thrown out of discussion The daily risk of danger from falling is sufficiently great without adding anything more We want in these cases a series of exercises calculated to develop the entire muscular system symmetrically, correct any physical deformity as far as possible, and add nothing in the way of risk from a sudden fall In beginning systematic exercise with younger patients, the Swedish system of educational gymnastics is invaluable in educating the young, growing muscles for more complicated exercises giving the best possible results with the least exertion, stimulating not only muscular, but mental development as well, overcoming in a measure the muscle habit of involuntary contraction as seen in the epileptic fit, and generally promoting the physiological action of the internal organs

Epileptics suffer from obstinate constipation which is extremely difficult to overcome by ordinary treatment, and I am of the opinion that the acne of those who are taking the bromids constantly is in many cases as much due to irregular action of the bowels as to any direct effect upon the skin by the drug, this constipation, skin trouble and depression seen in some cases where larger doses of the bromids are being given may be cured in most cases by gymnastic and other active exercises, and there is rarely a case so stubborn that it is not at least benefited One of the most important effects of exercise is produced upon the lungs It is well known to those whose practice involves a close acquaintance with the chest capacity of the average man, that few utilize the entire compass of their lungs, *especially* is this seen in these defectives Now, if the observations of Valentin and Sczelkow are correct—that the greater part of the carbon dioxid which the respiratory organs throw off is formed in the *muscles*, exercises which shall strengthen respiratory effort and increase the lung capacity should be faithfully followed out Indirectly exercise may exert very valuable effects upon excitable nerve centers, as well as act positively in eliminating the waste products of the entire body

Motion, especially such as may be made toward some pleasurable end, and active work which brings with it some reward, will often break up a beginning epileptic mania, and I am satisfied that all epileptics should be kept as actively employed as their condition and environment will allow

Walking is as suitable an exercise as can be given No extra machinery is needed and the effect can be studied many times It must be compulsory and the distance increased as the muscles permit In these days of rapid transit the legs are becoming a secondary means of propulsion, whereas they should be the chief

Americans are celebrated the world over as a nation of dyspeptics It is certain that we are a nation who use every available means to get to our journey's end with the least possible physical exertion and in the shortest possible time, and the query arises whether the dyspeptic symptoms would not vanish with a revival of walking as a popular method of travel

Football is another method of overcoming the inertia of our patients by a pleasurable game, the striking bag of the pugilist may also be utilized for those who can stand the violent exercise, the modern wall-machines offer very elegant and very effectual means for developing the muscles But all such exercise, whether easy or violent, must be guarded by a watchful and intelligent teacher, lest more harm accrue than good

That diet and exercise are but subsidiary means in the treatment of epilepsy must be admitted, that they are valuable corollaries to such drugs as may be prescribed is, I think, equally true But unless properly prescribed and administered their therapeutic value diminishes

The time will come probably when a large majority of our epileptic population will be gathered together in branch asylums connected with our State institutions for the insane and feeble minded, or in private asylums devoted to that class of patients, and it is from these asylums, where the patients are under the eye and training of a medical officer who has himself been trained in physical culture and made a study of diet, that results are to be had worthy of study, until then we are, so to speak, in a realm of theory

The older and chronic cases are beyond cure and almost beyond amelioration, but there are many cases of young children among whom, if taken in time, removed from home environment and placed under discipline, carefully studied physically and mentally, thoroughly drilled in exercises calculated to increase muscular development and to develop muscular control, with less attention paid to teaching book knowledge and more attention paid to training in habits of obedience and decorum, I take it that more might be cured and certainly the care of the incurable would become a simple problem It may, I think, be reasonably concluded, that diet and exercise are important auxiliaries in the treatment of epilepsy, that diet should be, as the term implies, food prescribed by a physician, that an extreme opinion, either for or against a dietary consisting entirely of nitrogenous matter or, on the other hand, strictly vegetable, is entirely wrong, and a middle opinion, which will give the patient thorough study and afterward arrange the diet according to the patient's physical needs, is the proper theory, that exercise should also be prescribed by a physician and followed out under his eye as far as possible, particular attention being given to exercises calculated to develop respiratory action, strengthen the heart and generally promote muscular control

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WHEN SHALL WE OPERATE IN CASES OF APPENDICITIS?

BY A M HAYDEN, M D
SURGEON TO ST MARY'S HOSPITAL, EVANSVILLE IND

The above question is one that every member of the profession is trying to solve The subject has been much discussed Learned essays have been written, read and discussed by learned bodies, often backed up by statistics which, according to the author's views, clearly establishes the correctness of the conclusions set forth in his paper He does not stop to consider the possibilities of inaccuracies of his statistics In fact, I am satisfied that our statistics of appendicitis and its results are not to be relied on

The disease and its classifications have not been sufficiently understood to make them trustworthy and a valuable aid to definite conclusions For instance a catarrhal relapsing form of appendicitis may apparently recover seven or eight times under medical or the expectant plan of treatment, and the ninth time, owing to the fact that the patient had had previous similar attacks and recovered without an operation, he refuses to be operated on until he is in a dying condition He then submits, and dies Statistics give eight recoveries without operation and one death with operation when in reality there are no recoveries, and all due to the fact that the one case had been treated by an advocate of the expectant plan of treatment, and had not been operated on Had the same individual been operated on during one of the earlier exacerbations of the disease he would have in all probability recovered, and statistics would show one case, one operation and one recovery, instead of eight cases recovered by medical treatment, and one case operated on and one death

Such statistics must necessarily be misleading In order to properly understand appendicitis, we should first classify the different varieties or forms of the disease, and so arrange the symptoms as to be able to make our diagnosis of the class of the disease we have to deal with by exclusion Until this is done, there will always be more or less confusion and difference of opinion in regard to treatment, whether it should be operative or medical First, then, we have an acute perforating appendicitis, which runs its course very rapidly, perforation taking place in from twenty-four to seventy hours, producing a septic peritonitis that proves fatal in possibly 95 per cent of all cases that are operated upon, and 99 per cent of all cases that are left to medical treatment Such cases, if correctly diagnosed and operated on before perforation, can nearly all be saved Then all cases belonging to this class should be referred to the surgeon for operation Second, we have a catarrhal appendicitis, which is an inflammation due to bacillus coli communis traumatism or a foreign body in the appendix, such as fecal concretions or seeds, the latter cause is seldom present This form is usually of a recurring or relapsing nature, one or more attacks occurring within a shorter or longer period Some cases are accompanied with suppuration and abscess within or without the peritoneal cavity Some cases result in perforation and cause death very much in the same manner as those cases of acute perforating appendicitis This form of appendicitis is the one that has caused so much confusion and difference of opinion in the profession in regard to what treatment should be adopted Some of the cases terminate by resolution and the patient gets well without an operation, some terminate by suppuration, point externally, open and the patient recovers Those cases that terminate in perforation, producing peritonitis, are the ones that the surgeon is often called to operate upon, and generally after fatal septic peritonitis has taken place.

He operates to give the patient the benefit of the little chance left, death follows, the physician says, "I told you so," and writes a paper condemning operative procedure in cases of appendicitis to be read before his medical society He has probably treated a few cases of recurring catarrhal appendicitis and succeeding in relieving them of their attacks, for the time being, left them for some surgeon to operate on in the future, he is then able to draw statistics He has three or four recoveries from medical treatment to report, and one case where surgical treatment failed He does not state what the result would have been in the case treated surgically had it been treated medicinally In my judgment, the only way to arrive at a trustworthy decision of the comparative value of operative or non-operative treatment of appendicitis would be, not to report a case as cured when treated medicinally until a sufficient time had elapsed to be sure the case was well and would not return, say a period of two or three years We should also include the cases under this head that had been so treated until they were in a dying condition before operative interference In other words, all cases operated on after medical treatment of a longer or shorter time, and at the time of operation were found by the surgeon to be in a condition that excluded the possibility of recovery, whether operated upon or not It is unfair to surgery to class such cases as surgically treated, and statistics based on such classification are of no value On the other hand, in making up statistics for the surgeon the only cases that should be included are those that have been treated by the surgeon from their incipiency, cases where the surgeon had been privileged to operate at the time, in hi judgment, was the most suitable or most promising Such statistics when carefully compiled would be valuable aid to the physicians as well as the surgeon in determining the course of treatment to be pursued What is needed at the present time is more thoroug knowledge of the different phases of the disease an the peculiar symptoms accompanying each, that w may be able to distinguish one from the other an so determine the best method of treatment Unti this is accomplished there will always be the wides difference of opinion in regard to what treatmen should be adopted It would also be well for th physician and surgeon, while investigating the differ ent phases of the disease, to carefully study the earl symptoms that he may be able to recognize the ex istence of the disease in its incipiency, as a favorabl result often depends upon early treatment, especiall so when surgical means are resorted to Among th earlier symptoms are more or less pain over the a domen, tenderness over McBurney's point, midwa between the umbilicus and crest of ilium, sometime cramps in the bowels, with diarrhea or nausea either of the above symptoms are present we should suspicion appendicitis and make a careful examination for the same If we recognize it at this stage and operate, 95 per cent of our cases will recover If we fail to make our diagnosis until we have a general septic peritonitis, then we have a complication that will add very greatly to the mortality under any treatment After peritonitis takes place we nearly, if not quite, always have perforation, and, excluding cases of peritonitis caused by septic tubes or ovaries, perforation of bowels by ulcers or traumatism, peritonitis means appendicitis During the last five or six months I have had several cases, two especially interesting, which I will report

March 6, I was called six miles into the country to see a young man about 30 years of age Upon arrival I found he had been awakened during the night with severe cramps in his bowels, attended with diarrhea and some vomiting, his temperature was normal pulse 80 per minute, respiration 18 Upon physical examination I found the skin moist and cool, tenderness over the entire belly but no distension or tympanites, tenderness over McBurney's point was more marked than anywhere else, and on deep palpation I imagined I could detect a small indurated mass I diagnosed appendicitis and advised an immediate operation Upon inquiry on the part of the patient if it were not possible for him to get well without an operation, I told him that very few cases recovered without an operation, but that when they did the trouble often returned and continued to give trouble, and sometimes perforation took place, producing peritonitis, which nearly always proved fatal He finally said he would think it over until the next day when he would give me an answer The next day I found him comfortable, no fever, no tympanites less tenderness over the abdomen and very little over McBurney's point I imagined that the induration I had felt the day before had disappeared The patient was not ready to be operated upon and I was much less inclined to urge it I continued to see him every other day for about ten days, during which time he continued to improve, with regular bowels, no pains, or very little if any I discontinued my calls with instructions to call me at once if any untoward symptoms should manifest themselves Two days later I was sent for in a hurry to see him I found his temperature 103, pulse 100, and quite an indurated mass in right iliac region I now insisted on an immediate operation He was sent to St Mary's Hospital and I operated on him the next day, March 21 I found necrosis of the appendix, and also quite a large portion of the bowel The appendix had sloughed off and was found in the cavity with the pus and fecal matter that had escaped from the bowels I removed the appendix, closed up the opening in the gut, washed out the cavity and packed with iodoform gauze The patient recovered, but he was two months at it He had no fever or peritonitis after operation The wound suppurated, the necrosed gut separated, came away and left a large fecal fistula through which all his stools passed for a month The fistula finally closed and the patient is now well Had he submitted to an operation when I first saw him it would have been much less dangerous, and he would have been well within two or three weeks with one-tenth of the suffering and annoyance that he had as it was The other case occurred in a young man 31 years old I saw him on Sunday morning at 6 o'clock, Nov 3, 1895, and found his temperature 102 5, pulse 90, tenderness over the abdomen, and quite an indurated mass in right iliac region, which was extremely tender on palpation He stated that he had first felt pain and uneasiness in the bowels Thursday night, he was better Friday, and went to the office to look after his business, Friday night he again felt bad and had considerable pain in bowels, Saturday he was again feeling better, and went thirty miles in the country to attend to some business on his father's farm, his bowels moved as usual Friday and Saturday, without pain, Saturday night he had a severe pain in the bowels, attended with fever and a swelling in the region of the vermiform appendix He then realized he had an appendicitis (he being a physician), he also knew something must be done to avert the impending danger, and he sent for me at daylight to operate I examined the case, diagnosed appendicitis I laid the facts before him as I saw them, and advised an immediate operation, which he consented to at once He was taken to St Mary's Hospital, where I operated on him at 11 o clock I found perforation of the appendix, with quite a quantity of fecal matter and pus, which was shut off from the peritoneal cavity by the flimsiest kind of adhesions The wall formed by the adhesions was so frail that I am satisfied they would have given away before a few more hours' accumulation of pus and allowed the contents of the cavity to escape into the general peritoneal cavity which would have precipitated an attack of septic peritonitis that would, in all probability, have proved fatal The patient's convalescence was uninterrupted

I might go on and report a great many more cases in evidence of the importance of early operations, but I think the above are sufficient Nearly all operators with much experience have reported many cases where early operations were the means of saving lives, while had they been delayed death must certainly have followed In conclusion, I think until we are able to differentiate between the cases that are going to perforate and allow the contents of the bowels to escape into the peritoneal cavity and those where nature will throw out plastic lymph and form a wall separating the diseased appendix from the peritoneal cavity in such a manner as to seal up the pus cavity and thus cause it to open externally, and the catarrhal relapsing variety, which sometimes recovers without operation, by means that are unmistakable, that all cases of appendicitis should be operated upon as soon as diagnosed, because the danger is almost *nil* before perforation, but after perforation an operation will not always stop the progress of the septic condition Of course some cases will never recur, and if we operate on all cases we would operate on some that would get well without an operation, but with our present knowledge we can not tell which case will recur and have no relapse and which will not, and by waiting until rupture has occurred many cases will die which, by prompt surgical interference, would be saved

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The Health of the Pope —His Holiness is so far reëstablished in health that on several of the bright, dry, exhilerating days we have been enjoying lately he has been able to take carriage exercise in the Vatican gardens These outings are timed for midday, when the warmth is greatest, and have included a visit to the Tower of Leo IV and to that stretch of the gardens which is cultivated under His Holiness direction —*London Lancet*

ON SOME DIFFICULTIES IN REFERENCE TO THE EARLY SURGICAL TREATMENT OF APPENDICITIS

BY CARL BECK, M D

PROFESSOR OF SURGERY AT THE NEW YORK SCHOOL OF CLINICAL MEDICINE, VISITING SURGEON TO THE ST MARK'S HOSPITAL THE GERMAN POLIKLINIK, THE GERMAN DISPENSARY OF THE WESTSIDE OF NEW YORK CITY ETC

Although discussions upon appendicitis have been quite numerous lately, I hope there is no need to apologize for bringing this subject up again In view of the immense importance and the great interest which attach to this disease, and also of the *many points still entirely obscure and unsettled* in connection with it, and last, but not least, the continued existence of so many skeptics as to the prevalence of the affection as well as to the importance of its surgical treatment, it can not at present be discussed too frequently

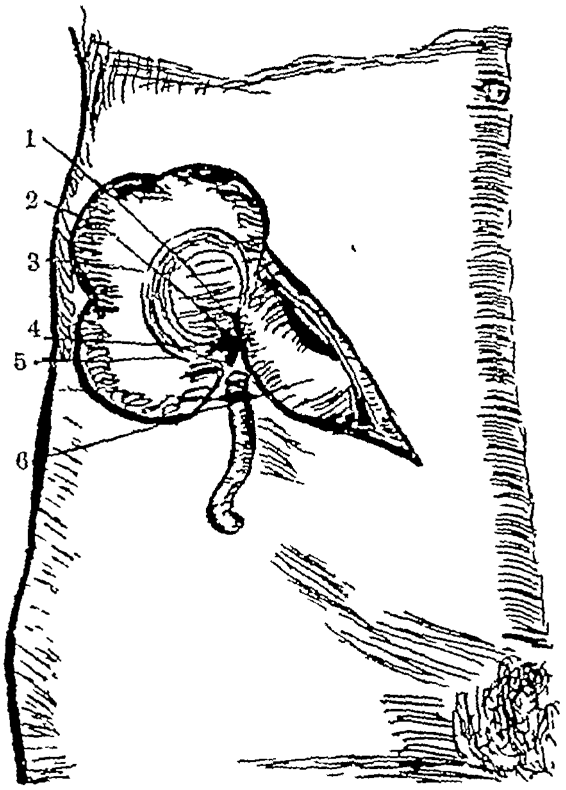
While it is true, that the surgical technique of the operation for appendicitis has reached, especially through the efforts of surgeons of this country, a state of perfection hardly to be excelled, it is to be regretted on the other hand that, as to the affection itself, particularly as to its etiology, diagnosis and prognosis, a vast number of errors still prevail This deplorable fact appears to me to be the more important in that recently even the general press has taken a great and most unpleasant interest in this particular *locus minoris resistentiæ* of our medical knowledge Thus an obstruction policy is raised against timely surgical interference, which doubtless handicaps the treatment of a great many cases

As stated before, the technical part of the question before us has reached a state of most gratifying perfection As soon as the abdominal cavity is opened, the further surgical strategy is, as a rule, clearly outlined

If the operation is done for relapsing appendicitis, if, in other words, a simple appendicectomy is to be performed, no difficulty is encountered Under the auspices of thorough asepsis, in fact, the prognosis is most excellent The incision, at least four inches in length, should be made parallel with Poupart's ligament and with its center opposite the spina anterior superior ossis ilei In th way enough space is secured to allow complete and safe work The section of the musculus obliquus externus and of the aponeurosis should be made to correspond, care being taken by using blunt instruments (handle of scalpel, of closed Cooper's scissors) not to cut any fibers crosswise If the parts, thus separated, are well readjusted after the operation, perfect union will take place Thus formation of abdominal hernia will best be prevented Care should naturally be taken to use the same blunt instruments for separating the fibers of the musculus obliquus internus and transversus, the direction of which is somewhat oblique to those of the musculus obliquus externus

After the peritoneum is divided and the caput coli pulled out, the appendix is easily brought to view and removed Care should always be taken to ligate the mesenteriolum of the appendix in several portions, before the latter is severed Having carried out this precaution a reliable assistant presses the appendicular region of the cecum firmly together in order to prevent any outflowing of the intestinal contents, while with the scissors the appendix is snipped off very close to the cecum Previous to the separation, however, if palpation has shown the presence of fecal matter within the appendix itself, it is my custom to prevent its escape by surrounding the appendix with a ligature close down to the point of the intended division (See illustration) In case of insufficient assistance it is advisable to put a prophylactic suture around the base of the appendix *between the point* of the intended division and the cecum This can be removed after the small opening is closed The closing is effected by two to three Lembert's sutures of thinnest silk, inserted through the serosa Perfect approximation is facilitated by stripping the musculo-serous coat somewhat backward to the cecum, just as the skin flap is retracted in a circular amputation, and cutting off the protruding mucous coat

A small amount of iodoform powder is dusted into the inner surface of the stump, but the wound itself must not be brought into contact with any antiseptic substance Silk is chosen for the peritoneal work, as well as for that of the abdominal wall, on account of its antiseptic reliability, which, in my mind, outweighs the otherwise considerable advantage of catgut



APPENDICECTOMY

1, 2, Prophylactic ligature 3, Cecum 4, Stump 5, Protruding mucosa ligature 6, Lower portion of ileum

The same principles hold good when extensive adhesions are found These are divided To gain more ground for safe work it will be sometimes advisable to add a second incision, rectangular to the first and running from its center toward the spina anterior superior ossis ilei It is to be understood that union by first intention is striven at just as in a case of ordinary appendicectomy

But an entirely *different plan of treatment must* be pursued if the inflammatory process has been followed by the formation of an abscess Most fortunately, protecting adhesions are established in the great majority of such cases, creating a real empyema (I would propose to call this pyo appendix, in analogy to pyothorax, pyosalpinx, etc) As this is practically an extraperitoneal abscess, it gives a most excellent prognosis, as a rule, and is not to be compared in significance with that of a pus accumulation in the free peritoneal cavity.

The incision through the abdominal wall in such cases should be the same as described above. Then, after the peritoneum is reached, a grooved director is introduced in the direction of the abscess. As soon as pus appears in the groove of the instrument, a small Pean forceps is pushed in alongside the groove of the director. After the opening is gradually dilated, the cavity is exposed by holding back the tissues with blunt retractors. If the appendix is now found lying free in the cavity, its removal is a matter of course. The whole cavity is then packed loosely with iodoform gauze, which is then protected by a large layer of mossboard.

When, however, the appendix is gangrenous and is surrounded by strong adhesions, having become, in fact, a portion of the walls of the pus cavity, thereby shutting off the latter from the great peritoneal sac, the danger of its immediate removal would be very great. It is a well adopted surgical principle to remove gangrenous tissue, wherever it may be, without delay. But like many other axioms this has to be taken *cum grano salis*. The punctum saliens will be here, whether the price paid for the removal of such an appendix is not too high. While it would certainly be desirable to see such a dangerous element eliminated, the breaking-up of the protecting walls would certainly entail the greatest possible risk of infecting the whole peritoneal cavity. Great is the difficulty of determining a border line between radical and conservative indications in such cases, and it will frequently be left solely to the surgical instinct whether the appendix should be hunted for and removed or not. The more radically disposed surgeon, eager to avoid possible recurrence, tries to get hold of the appendix, cost what it may. The conservative surgeon, eager to avoid infection of the general cavity by risky manipulations, is apt to satisfy himself too easily by simple evacuation of the liquid contents of the cavity, thereby assuming the risk of overlooking a second pus accumulation. It is deplorable that, so far, it has been found impossible to lay down a golden rule for the guidance of the surgeon at this herculean crossway.

If the gangrenous appendix is not removed, it should be carefully surrounded by iodoform gauze, in the expectation that it can be removed a few days later. Beside packing the cavity with iodoform gauze it is advisable to pour in about a tablespoonful of a 10 per cent. mixture of iodoform-glycerin.

If appendicitis has ceased to be a local infection and a general peritonitis is fully established, the surgeon is at a loss in the far greater majority of cases. Much, however, can sometimes be done by careful and extensive examination of the peritoneal cavity, the finger or grooved director being valuable diagnostic means. Such explorations, done if possible under anesthesia, frequently disclose conditions, which by superficial examination were not discovered, such as secondary abscesses between the loops of the intestine, etc. Here the treatment should be to thoroughly evacuate the abscess, wash out the peritoneal cavity with a hot saline solution, carefully wipe off the fibrinous exudations, and introduce iodoform gauze—preferably wicks, on account of their greater absorbent power—or small drainage tubes surrounded by iodoform gauze, as advised by Mikulicz. Such procedures will once in a while, even in bad cases, meet with astonishing success. Clinical experience has shown that recovery has taken place even when the surgeon proceeded to the operation without a spark of hope, where, for instance, the pulse was not perceptible. Vice versa, however, cases have ended fatally where the prospects were comparatively good. It is no doubt depressing for a surgeon to proceed to heroic manipulations under such circumstances. But it should not be lost sight of, that a patient suffering from general purulent peritonitis has, indeed, nothing to lose. He should therefore be operated upon at all hazard. The permission of the patient can be obtained almost always on account of his great suffering and his cognizance of the unfavorable outcome of treatment by internal medication. It has been my experience that the trouble in getting the permission in such cases comes from the attending physician and not from the patient or his friends. Consultation and consideration usually consume most valuable time.

ABDOMINAL SCAR TWO WEEKS AFTER APPENDICECTOMY

Extensive exposure of the peritoneal cavity enables the surgeon to evacuate the pus from pockets and crevices of the abdominal cavity and destroy adhesions which form the walls of small abscesses. These adhesions are generally the outcome of a previous inflammatory process, and often form a great impediment to the thorough evacuation of the pus. A thorough disinfection of the abdominal cavity is still a desideratum, but if at least a large quantity of infectious material is removed the degree of the toxic influence is considerably reduced. By thorough evacuation also the intra-abdominal pressure is necessarily lessened, so that the respiration, as a rule, becomes much freer

How much such heroic procedures as alluded to above can sometimes achieve, may be illustrated by a case of my own, the history of which I beg to submit (Compare Beck, "Tubercular and Suppurative Peritonitis," *New York Medical Journal*, April 21, 1894)

Jacob W , aged 7 years, who had always been in good health before, was suddenly taken sick with chills and sharp pains in the region of the umbilicus Vomiting set in a few hours later Dr Sandberg of this city, who was called in, administered laxatives and also washed out the stomach and bowels without effect, he was accordingly led to suspect ileus from intestinal obstruction and advised immediate laparotomy When I saw the patient on the evening of May 17, 1893, I found a strong, well-nourished boy, showing the typical facies Hippocratica The weak pulse was 131, temperature 101, and the respiration 32 The abdomen was tympanitic and very painful to the touch Resistance or particular tenderness at the right iliac fossa was not present After thorough aseptic preparations at the house of the patient, an incision, 5 inches in length, was made in the manner described above About three tablespoonfuls of gray malodorous pus were discharged The intestines were found glued together by fibrinous adhesions to the extent of about half of the peritoneal cavity They were of a dark red color and could be brought to view only after a cross incision, rectangular to the original one, reaching nearly as far as the umbilicus, was added Above the synchondrosis sacroiliaca dextra a second pus cavity was found and evacuated By hunting for the appendix the cecum was found tightly adherent to the synchondrosis sacroiliaca dextra, from which I was afraid to separate it It can safely be said, that fully two yards of the small intestine, covered with fibrin and purulent exudation, were carefully pulled out, washed with sterile water, and wiped with peroxide of hydrogen Iodoform powder was dusted over all the portions of the intestine, which had been covered with exudations The edges of the cross incision only were united One loop, about twelve inches in length, was kept outside the abdominal cavity, as it had a dark blue tint, which gave a suspicion of possible ensuing gangrene It was enveloped in iodoform gauze and the fossa iliaca dextra was also packed well with the same material and the whole was protected by a large moss-dressing

After the patient had rallied from the shock, his condition became quite satisfactory, until, five days later, pain as well as a considerable elevation of temperature induced me to examine the cavity closely by introducing my index finger, whereupon a retention of pus was discovered in the lumbar region A counter incision was made at once above the crista ossis ilei and a large drainage tube, surrounded by iodoform gauze, introduced Great improvement followed this procedure It was not ten days before I replaced the enveloped portion of the intestine At the same time I again tried to find the appendix but in vain, and as the patient made rapid and satisfactory improvement, no further attempts were made to improve it

Three weeks after the first operation the patient was seized with sharp pains in the region of the bladder, frequent micturition troubled him and his general condition became considerably impaired No retention of pus could be detected, nor did examination through the rectum and the urine reveal anything in particular The patient gradually became weaker, had incontinence of feces and several attacks of syncope After I had conquered a good deal of opposition, the patient submitted to another operation By pushing the index finger toward the bladder, adhesions were destroyed which had formed the walls of a cavity, extending from the posterior wall of the bladder to the rectum Two tablespoonfuls of creamy pus were discharged Forcing my index finger as far as possible toward the opposite side, I succeeded in incising on its tip, so that a drainage tube, nearly one foot in length could be pulled through Great improvement followed this time also, and two weeks after a portion of the drainage tube was pulled out This "post-vesical cavity" was now drained from the right side only, so that the counter-opening on the left side became obliterated Contrary to my instructions the patient was allowed to get up and was taken sick again with chills and convulsions, the source of the trouble this time again being furnished by retention of pus in the same post-vesical cavity Drainage was again established as before, from the right to the left side When the symptoms had subsided, the drainage tube was pulled out from the left side and the old right opening was allowed to obliterate Two weeks later the drain was removed entirely and iodoform wicks substituted for another week, after which recovery became perfect In the right iliac region a large ventral hernia is left, doubtless due to the weakening of the abdominal wall by the long continued drainage As it does not disturb the patient, it is difficult to persuade him to submit to a secondary operation

In this case the dangers arising from repeated pus retention were readily counteracted by energetic interference So fortunate an outcome, however, must be regarded as an exception Though we are well-nigh letter-perfect in the technique of operative treatment of appendicitis, we are deplorably ignorant of its etiology If we accept Chauffard's dictum "*Toute la thérapeutique est dans l'étiologie*," such ignorance may furnish the explanation of the uncertain therapeutic measures which are still adopted by many physicians at the early stage of the disease

It is customary to say that the prognosis of the disease depends upon its toxic agent, but this is a rather defective explanation Appendicitis may have its starting point in a simple inflammation of the mucous membrane of the cecum near the ilio-ceca valve Such catarrhal process might easily extend into the appendix, and even though giving rise to no immediate symptoms might, nevertheless, produce a stricture of its lumen that would lead to retention, or it may even obliterate a part of the appendix (appendicitis obliterans) Even during such slight inflammation the patient is always exposed to the danger o peritonitis, be it caused by perforation or not The protecting epithelium of the mucous membrane o the appendix might also become displaced or eroded so that bacteria can easily invade the rich layer o adenoid tissue beneath, finding there most favorabl conditions for their development As the bacillu coli communis has its permanent domicile in thi part of the bowels, and as it very frequently is found in pus cavities in or around the appendix, it was a first thought to be responsible for the trouble Bu other microorganisms are also found in compan with the bacillus coli communis, particularly th streptococcus Welch advanced the theory, that is the companionship of these two microbes whic excites inflammation in this connection, and tha the fact that the streptococci were not found shoul not be considered a sufficient proof of their absenc The colonies of the bacillus coli communis grow s much more rapidly and extensively than those of th streptococcus, that the much smaller ones of the la ter may be completely overshadowed But as bot microbes exist in the intestines of every individua certain conditions, still unknown to us, must arise i order to give these elements a chance to exert the infectious influence Do such conditions exist i changes of the mucous membrane as alluded above or in circulatory disturbances caused by th curved and angular shapes of the appendix, by a insufficient supply of blood or by encysted fecal ma ter, particularly if previous catarrhal inflammatio has left a stricture? Regarding foreign bodies as a etiologic factor, I must say that in about one hundr and fifty cases of appendicitis operated upon in m own practice, I have been able only once to discov one seed For the last few years I have taken particul pains to search for the appendix in all my other cas of laparotomy, and have repeatedly found ha masses, probably fecal matter, in the lumen appendicis in individuals who had never up to that time and have never since shown any symptoms of appendicitis Slight pressure sufficed to press such contents out into the cecum I have frequently asked myself in such cases, whether it were not my surgical duty to remove the appendix, but up to date I have not been able to convince myself of the necessity of such a radical step Such observations, however, have led me to believe, that despite the absence of a circular muscular layer, circulation of fecal matter in the appendix is possible

In considering the microbiotic theory of the causation of appendicitis we must also not overlook the fact that the micrococcus lanceolatus (Fraenkel), the bacillus pyogenes fetidus and other microorganisms are also found in the pus formations Furthermore, in reference to the much-discussed bacillus coli communis, it must also be borne in mind, that according to the experiments of Kiessling (Hygienische Rundschau Bd 3, p 724), what is usually called bacillus coli communis does not represent a a single bacterial species, but that a great many intestinal bacteria are grouped under this head, which, though alike in several respects, differ distinctly in others Apropos of the whole germ theory of disease, it will doubtless puzzle us for a long time to name the conditions under which the same streptococcus will set up a trifling tonsillitis in one case or a fatal meningitis or appendicitis in another Nor will it be less difficult to explain why the same toxic elements in one case cause a circumscribed inflammatory process or a localized abscess, while in another they produce rapidly fatal septic infection Undoubtedly there exist various forms of sepsis, which our defective means of diagnosis hinder us from differentiation If we were cognizant of these conditions it might be possible to form a prognosis by bacteriologic test During operation, of course, specimens can easily be obtained Unfortunately, however, only a few microbes can be recognized by the microscope alone, so that no adequate conception either of the cause or of the amount of the sepsis can be formed The great majority of microbes at present known can be made out only by bacteriologic examination, which has the disadvantage that the cultivation of most species consume so long a time as to be practically useless in this connection Therefore, clinical experience, ocular inspection and the estimate of the general condition will more often furnish the grounds for prognosis as well as the indications for further surgical steps

Difficult though it may be in many cases to determine the best course to pursue after we have opened the abdomen—how much more difficult is the decision before it has been done Are the symptoms, so well known to us through the text-books, always sufficiently developed at an early stage, the stage which warrants success after surgical interference? The diagnosis of appendicitis is based upon the presence of acute abdominal pain, the suddenness of the attack, the tenderness and resistance at McBurney's point, the occurrence of nausea or vomiting together with more or less febrile disturbances Increased temperature in itself is not a reliable symptom, but Madelung regards a marked difference in temperature between that of the mouth and that of the rectum in favor of the latter as peculiar to this disease

But all the symptoms mentioned are at times also found in other abdominal diseases The surgeon's knife has frequently demonstrated the presence of appendicitis in cases in which a diagnosis has been made of psoas abscess of the abdominal wall, typhlitis, perityphlitis, paratyphlitis, salpingitis, oophoritis, peritonitis, intestinal obstruction, typhoid fever, cholelithiasis, hepatic abscess, nephrolithiasis, and even of malaria, influenza or pneumonia Very often the patient has reached the autopsy table before the error diagnosed has been discovered The effect of these unfortunate mistakes has been to bring cases to the surgeon's notice at an earlier stage than formerly, and to throw upon him the responsibility of choosing between the danger of delay and the rashness of operating before the symptoms are sufficiently developed Is it fair to expect that he will always choose aright? As explained above, he can not at that stage of the disease obtain sufficient knowledge of the toxic agent and of its significance and localization Is it possible, for instance, to recognize a small ulceration in the appendix or to distinguish it from a so called benign catarrhal process? There is, as a rule, not a single reliable symptom for differentiation As soon as perforation has taken place the symptoms become violent enough to leave no doubt—but then the disease is no longer appendicitis but peritonitis

It has always seemed to me, however, that the thing to be feared in cases of appendicitis is not as much the danger of perforation as the possibility of septic infection from the original seat of inflammation If this be so, early operation would seem to offer the strongest, frequently the only chance of success This would imply that the surgeon should operate even during the first twelve or twenty four hours A family physician holding this view might be disposed to urge immediate operation But woe to the surgeon, if his expectations are not realized after the abdomen is opened It has happened, that just he who urged most strongly, will be his most pitiless critic, shifting all responsibility upon his shoulders If, on the other hand, the surgeon defers the operation until the symptoms become more manifest, any unfavorable result will subject him to the same ungrateful treatment I have a vivid recollection of a 6-year-old boy who, after having swallowed a considerable number of orange seeds, was suddenly seized with sharp pains in the right iliac fossa Vomiting and slight convulsions set in shortly afterward His temperature was 106 F, pulse 144 and respiration 42 Tenderness at McBurney's point being also discovered the family physician, quite naturally, made a diagnosis of appendicitis The fact that the boy's abdomen had been jumped upon by a companion during play seemed to add further weight to this opinion A well-known surgeon of this city was called in on the same day, but as he could not ascertain any marked resistance in the right iliac fossa, advised expectant treatment The right leg of the patient, by the way, could be lifted without causing any pain I had a chance to see the patient at the same time A general examination of the patient gave me the impression of a pulmonary disturbance, the difference in the percussion note, however, being only slight It was agreed to call in a specialist for lung diseases, who, upon examining the child on the following day, made the diagnoiss of pleuro pneumonia [Three weeks later I resected a rib for pyothorax, recovery]

This case is simply a sample of many of the cases in which a surgeon is called to operate for appendicitis where no appendicitis exists. They all serve to show that physicians have learned that procrastination in the surgical treatment of appendicitis is a dangerous thing. And yet, while in the case described above, a laparotomy, although in this connection an unfortunate procedure, would perhaps have been justifiable, in other cases a thorough general examination would have been sufficient to show the inadvisability of operation. It seems to be the opinion of some physicians that, if any trouble arises in the region of the right iliac fossa, no further testimony as to the existence of appendicitis is required. For instance, I was recently called by a most able brother to see a young woman who, six weeks after confinement, was supposed to have acquired appendicitis. There was acute pain in the right iliac fossa, distinct tenderness, vomiting, constipation and slight fever. If I had suggested an operation the family physician as well as the family would have consented at once. Examination of the sexual organs had previously been proposed by the physician, but the patient had stubbornly refused it. Having finally overcome these objections, however, we easily made out a salpingitis, undoubtedly due to the confinement.

In this connection let me say, that in operations for salpingitis I have repeatedly found the appendix participating in the inflammatory process, its end being sometimes soldered to the ovary. I have several times removed ovary, salpinx and appendix together, imbedded in a colloid mass. In such cases, which naturally were preceded by inflammation of long standing, particularly after confinement, the peritoneum was partially resected, as it was found considerably thickened. All these cases turned out well.

Considering all the points alluded to above, it is doubtful whether the time will ever come when it will be possible to make a rational prognosis of the course of appendicitis through its early symptoms, particularly as to whether the case will be one that will "heal spontaneously." This much, however, should be maintained, that appendicitis should not be looked upon as a medical disease up to the time that it has reached an "operative stage." It should not be left to the family physician to call in the surgeon when he wishes him to operate, thus putting the surgeon in a most undesirable position in relation to the case. It should not be left to the family physician to decide whether the operation is to take place at all or when, but the surgeon should bear the full responsibility from the very beginning. An illustration of the fairness of such demand may be furnished by the following case.

A man, 37 years old, a builder of this city, while on a vacation in the Alleghany mountains, had an attack of appendicitis, which was recognized as such by his physicians at an early date. Medical treatment was advised. As the patient himself was aware of the dangers of his disease and also of the advisability of early operation, he demanded a surgical consultation. His condition having improved two days after the onset of the disease, a report was sent to me by the physician, saying that the necessity for an operation had fortunately ceased, but if against all expectations my surgical assistance should be wanted a telegram would be sent me. On the following morning they summoned me to operate. After having gone more than one hundred miles of my journey, I received a dispatch on the train telling me not to come, as operation was unnecessary. Thinking that the patient had succumbed to the delay, I returned. Two days later, to my great surprise, the patient appeared in my office, telling me that on account of his great improvement two days before, after he had had another severe attack, the physicians had persuaded him to keep surgical interference at a distance. This morning, although he had had another attack of violent pain and was feeling very weak and nauseated, he had made up his mind to risk leaving for New York, a journey of ten miles on mountainous roads and six hours' travel on the train. In examining him I found all the classical signs of appendicular abscess, particularly the pain and the presence of a tumor in the right iliac fossa. His temperature was normal, pulse 76 and respiration 29. He could only walk in a bent position. At the operation, which was performed on the following day, a gangrenous appendix was found, loosely attached to the hard walls of a cavity which contained a pint of yellow creamy pus. The wall of this cavity completely excluded it from the cavum peritonei. The opening left in the cecum after the removal of the appendix could be closed only with great difficulty. Two days after operation feces were found in the cavity, indicating the presence of a fecal fistula which, however, became obliterated two weeks later. With this exception recovery was uninterrupted.

In this case the diagnosis was made at the proper time and therefore immediate operation was indicated. The physician who advised procrastination may feel excused by the fact, stated by so many capable men, that a number of cases of appendicitis recover without operation and that the appendix was repeatedly found healthy when an operation for supposed appendicitis is performed. In reference to the first point, however, there is a doubt whether the diagnosis is covered in those cases of appendicitis which are said to heal spontaneously, and, furthermore, whether such recoveries are not temporary and whether the fortunate outcome at a time has not to be dearly paid for by a sudden perforation or spreading infection in a second attack.

In reference to erroneous surgical diagnoses it may safely be maintained that they can fairly compare with those made by the pillars of general medicine. The few surgical mistakes made in this connection are well offset by the numerous fatal cases of appendicitis, not recognized and consequently not operated upon, which, if they had been given the advantage of an early exploratory incision would probably have recovered.

Weighing all the numerous difficulties alluded to, I may summarize my conclusions in that, if there is any doubt as to the presence of appendicitis at an early stage, an unnecessary exploratory incision is by far the lesser evil.

Another Fatality Chargeable to Athletic Sports.—A press dispatch from Salem, Mass., states that a young man, aged 25 years, died Dec. 6 from the effects of being struck on the head by a polo ball at the Salem and Fall River game. He did not complain of the injury until after reaching home. Medical assistance was procured, but it was of no avail. Serious injuries to polo players are not infrequent by reason of falls and collisions, but fatal accidents are not so common as might be expected. We do not remember heretofore to have seen a reported death chargeable to a blow from a polo ball.

SOCIETY PROCEEDINGS

Chicago Pathological Society

Regular Meeting, Nov 11, 1895

Weller Van Hook M D, President, in the chair

D W Graham, M D, made a report of cases with specimens

Case 1—Hypertrophied Bladder, Kidney and Ureter—Mr A F, 27 years old, entered the hospital Sept 17 last with extensive extravasation of urine invading the peritoneum, scrotum and penis and extending up over the pubes This began four days before with spontaneous rupture of the urethra from strictures There was already when the patient entered, profound septicemia, from which he died on the 19th, notwithstanding free incisions with drainage and external urethrotomy The patient had a history of gonorrheal stricture of two years duration with little or no treatment for the gonorrhea and no treatment for the stricture A limited post mortem examination was obtained The right kidney and its ureter seemed normal in size and consistency The left kidney is twice its normal size but there is no hydronephrosis The ureter is dense and as thick as the little finger The bladder walls are enormously thickened, averaging three fourths of an inch, and the cavity can not be made to expand to more than one-fourth or one third its normal capacity The microscopical sections show the hypertrophied bladder wall to consist of muscular tissue

The specimen is interesting as showing some of the remote results of gonorrheal urethritis when not treated, as well as the immediate consequences of untreated urethral stricture

But it is particularly instructive as explaining what is generally called and treated as chronic cystitis or irritable bladder following stricture even when all the obstructive symptoms of stricture as such have disappeared A patient with a contracted bladder cavity like this and hypertrophied bladder wall would necessarily have frequent micturition both night and day in spite of any and all kinds of drug or instrumental treatment

Case 2—Microscopic Specimen of Anatomic Tubercle—It was excised from the middle knuckle of the hand of a medical student recently It began while working in the dissecting room last winter The section shows characteristic tubercular tissue but tubercle bacilli have not been demonstrated Anatomic tubercle is now universally recognized as a local tubercular infection of the skin and occurs in the form of a warty elevation, a softened thickening at intervals, or as a thickened erythematous patch This specimen was of the latter form When favorably situated they should be excised

Case 3—Chronic Bursitis Popliteal Bursa Extending into the Leg—The patient was a male 20 years old large, robust and muscular He was apparently free from all the constitutional diseases, such as tuberculosis, rheumatism and syphilis to which chronic bursitis is generally ascribed There was only a slight suspicion of hereditary syphilis He had been under my observation somewhat irregularly for two years complaining of pain and soreness on the inner side of the right leg and a limited disability in walking During this period the patient was on antisyphilitic treatment part of the time because the pain seemed to be in the bone and periosteum and of possible hereditary origin After an absence of several months he reported to me in May, last, with an oval fluctuating swelling situated midway between the knee and ankle, and between the inner border of the tibia and the muscles Aspiration showed the sac to contain a synovial like fluid Later I extirpated the sac which I now exhibit, and which when removed, was as large as a goose egg The intimate connection of the sac with the deep fascia and the periosteum seemed at first to point to some kind of a congenital cyst It developed, however, that the upper end of the oval sac was continuous, by a tubular process as thick as a lead pencil, with the inner popliteal bursa This tubular process was exsected as high as the tuberosity of the tibia By means of a probe and flushing with a syringe the flattened popliteal sac was found to cover the whole popliteal space and to extend upwards a considerable distance Not having the consent of the patient and not being prepared for so important a procedure as opening the popliteal sac with the idea of a more or less complete extirpation, in view of the fact that the sac probably communicated with the knee joint cavity, I deemed it prudent to make no further dissection I swabbed the whole cavity freely with full strength carbolic acid, inserted a drainage tube and maintained elastic compression In a few days the patient went to work and the discharge of synovial fluid seemed to increase rather than diminish I then injected an ounce of the full strength carbolic acid and maintained it in the sac as long as possible, corking the tube and putting the patient at rest for twenty four hours This was afterward repeated After each treatment there would appear tenderness and effusion in the knee joint This resulted in diminishing the discharge which also became thinner but it was still sufficient to saturate a heavy dressing twice a day At this juncture (in July) the patient went to the old country and is now living in Vienna, Austria, where I learn he has since had some kind of an operation I should add that the patient complained of nothing and I observed nothing previous to the operation which led me to suspect that there was any trouble with any of the popliteal bursæ or other strictures in that region

My diagnosis is a chronic bursitis of the semimembranosus bursa possibly of tubercular origin although there were in the sac none of the "rice grain" or "melon seed bodies usually found in such cases The semimembranosus bursa is the largest of the natural bursæ Of the four popliteal bursæ it is the one most frequently enlarged In the adult it almost always communicates with the synovial sac of the joint as well as with one or more of the contiguous bursæ

DISCUSSION

Dr Gustav Fütterer—The anatomic tubercle is a warty growth of an extremely chronic character I have observed them on my own hands and on the hands of others in great numbers and for many years Here, for instance I can show you one near the tip of my index finger, on the volar side, one which needed more than ten years to reach this spot from a place on the back of the finger, about an inch distant from whence it started It will be noticed, that this tubercle has grown like most such tubercles, occurring near the end of fingers in a peripheral direction, and that it has left fine scars, representing the appearance of a net with very fine meshes

In favor of the genuine tubercular nature of those formations, I would say, that quite a number of investigators found tubercle bacilli enclosed in the tissues of the anatomic tubercle, that I have also seen them and furthermore, that I have seen tuberculosis of a hand joint originate from anatomic tubercles of the skin the latter almost covering the entire back of the hand This was in the case of a man, who for years daily prepared a number of cadavers for my work A resection had to be performed The tubercular granulations of the anatomic tubercle share another peculiarity with other tubercular granulations, and that is their fragility

Excision is not the only proper method for removing those tubercles I have had between thirty and forty of them on my hands and have successfully removed a number of them with the aid of muriatic acid, while the larger ones were successfully treated by Professor Schoenborn of Würzburg in the following way Schoenborn dipped a sharp but short-pointed glass rod into a 95 per cent solution of carbolic acid, then piercing the tubercle with it and repeating this five or six times at a sitting This procedure was very painful, but it caused the tubercles to shrink and after several treatments removed them entirely It was just then, I had occasion to observe the fragility of the granulations, for, while the point of the glass rod at first in the upper layers would find a strong resistance, later overcoming this, it would rush right through the granulations, down to the bone

Dr D D Bishop—The anatomic tubercle was examined for tubercle bacilli, but only a limited number of sections were prepared, and, of course the fact that the tubercle bacilli were not found would only indicate to us the fact that we probably did not search long enough, because the bacilli are known to be frequent in this variety of tubercle

Ludvig Hektoen, M D read an abstract of a paper on

THE VASCULAR CHANGES IN TUBERCULOUS MENINGITIS—ESPECIALLY THE TUBERCULOUS ENDARTERITIS

The genesis of tuberculous meningitis presents a great many points of interest Thus, for instance, the frequent, almost exclusive, localization of this process about the arteries of the pia mater, particularly those in the sylvian fissure, the question of the mode of importation of the bacilli into the brain, the presence of a mixed infection or not—these are all subjects of interest

Already in 1872, Buhl characterized general miliary tuberculosis, in which tuberculous meningitis often occurs, as a resorption and infection disease, likening the miliary tubercles to the metastatic abscess in pyemia, and Huguenin, in 1878, came to the conclusion that tuberculous meningitis was due to embolism into the meninges of some product produced in the older tuberculous foci which are nearly always found in the bodies of those who die from tuberculous meningitis Koch's discovery of the tubercle bacillus, and Weigert's demonstration of the way in which tuberculous foci may break into the veins, by changing the vein walls into granulation tissue, and thus flood the circulating blood with bacilli, furnished the direct evidence of what was thought to be the case

At the present time the majority of authors regard the infection in tuberculous meningitis as occurring through the blood There are only one or two exceptions to this statement Thus for instance, Babes thinks that in certain instances of tuberculous meningitis, particularly those secondary to tuberculosis of the peri-bronchial glands, the bacilli may be carried into the meninges along the deep lymphatics of the neck, by a retrograde import, and Hubbenet assumes the same route in a case described by him Then Demme and Coates have both described cases of tuberculous meningitis which may have been due to infection through the nose There seems, however, to be no question but that in the vast majority, if not in all, of the cases of tuberculosis, the bacilli reach the brain through the circulating blood, and that meningitis is secondary to some tuberculous focus in some place in the body A bona fide instance of so called primary tuberculous meningitis does not seem to have been described And yet there is really no reason why a real primary tuberculous meningitis might not originate when we take into consideration the fact, for instance, that Strauss examined twenty-seven healthy persons and in nine of these he found tubercle bacilli present on the mucous lining of the nose There is no reason why tubercle bacilli from the nose might not be carried directly into the brain by means of the lymphatics, and give rise to a tuberculous meningitis, precisely in the same way in which many forms of non-metastatic, suppurative meningitis are assumed to originate And then tuberculous bacilli have been found in the ear, and they might easily gain entrance into the meninges from that place These are only suggestions showing that a real primary tuberculous meningitis is not entirely impossible Now the opinion being so prevalent and universal that tuberculous meningitis is always of a hematogenous nature, the location of the tubercles in the vicinity of the vessels and the close connection with the vessels have been looked upon as sort of matters of course If we study the literature we find that the majority of the writers do not seem to have investigated this question very closely The exact relation of the vascular changes to localization have not been so very thoroughly investigated, we find for instance, that Rindfleisch, Zeigler, Birch-Hirschfeld, Lancereaux, Baumgarten and Guarnieri, and a number of others, all regard the localization of the bacilli as occurring almost always if not exclusively in the adventitia of the arteries, and from the adventitia the outer walls may be involved

In connection with this primary tuberculous periarteritis, there has been described, particularly by Guarnieri, but also by Baumgarten and others, an endarteritis, which has been regarded as secondary, either due to direct extension through the walls of the periarteritis, or produced in a rather indefinite way, somewhat in the same manner as chronic inflammatory processes in the vicinity of the arteries in various tissues appear to cause a proliferation in the intima, as witness the case described by Weintraud Then there are others, such as Huguenin, Huettenbrenner, Cornil and Hirschberg, who have observed a tuberculous endarteritis in tuberculous meningitis which they regard as primarily due to the direct implantation of the bacilli upon the intima of the arteries and to which many of the other lesions in the meninges are secondary

Now with this brief review of the literature before us, it is in order to summarily describe the cases which were examined in Prof Chiari's Institute in Prague Nine cases of tuberculous meningitis were studied, the technique of the examination was the ordinary histologic The only particular point to be called attention to was the fact that pieces of arteries, both large and small, were examined by means of serial sections It was found that only in this way could one gain a clear idea with reference to the mutual relations of periarterial and endarterial foci The bacteriologic examination was made by inoculating glycerin agar plates with the exudate at the time of the post-mortem In only one of the nine cases did there seem to be a mixed infection due to the staphylococcus pyogenes albus but as shown by the histologic examination this staphylococcus did not seem to have influenced the changes much The ordinary lesions characteristic of tuberculous meningitis were found In three out of five instances in which cultures were left under suitable conditions for the development of tubercle bacilli growths of tubercle bacilli were obtained In a majority of the cases, it was possible to demonstrate bacilli in cover glasses made from the fluid exudate This shows that the diagnostic measure of puncturing the spinal canal in certain obscure intracranial lesions may be of value because it may be possible to demonstrate tubercle bacilli that may be present in the cerebro-spinal fluid In two instances rabbits were inoculated with the exudate and developed tuberculosis In addition to examining the fluid in the meninges, bacteriologic examination was also made of the nose in some of the cases In these cases this examination was also limited practically to a search for tubercle bacilli In two out of five cases that could be examined in this way tubercle bacilli were found in small numbers Inasmuch as these cases were instances of multiple chronic foci of tuberculosis, the exact significance or source of the bacilli found in the nose can not be stated Gradenigo examined the contents of the internal ear and of the pharynx, and also the nerves that pass through the ear, and in a number of instances of tuberculous meningitis he found tubercle bacilli in these places, and he regarded these bacilli as passing out from the cranial cavity along these routes

Concerning the arterial changes, it may be said that in addition to the ordinary extra-vascular lesions, which are familiar to all, it was possible in all the cases to demonstrate changes in the intima of the smaller of medium sized arteries that have to be regarded as primary and as due to the direct implantation of tubercle bacilli into the intima The lesions that result from such implantation take two forms that are frequently combined but often singly present There may be a diffuse tuberculous endarteritis, consisting of a proliferation of epithelioid cells located underneath the endothelium, between the latter and the elastic lamina In addision to this diffuse tuberculous subendothelial proliferation, which sometimes exists to such a degree as to close practically the entire lumen of the artery, there were also found isolated miliary tubercles upon the intima In some instances giant cells were found in the diffuse tuberculous proliferation just mentioned, but without such an arrangement of the surrounding cells that the appearances could be characterized as a typical tubercle The more typical internal tubercles, however, did not present any special variations from ordinary tuberculosis When caseation was present in the intimal tubercles the endothelium over the tubercle would be absent In many preparations, including pieces of arteries in which there were no other changes except those located in the intima, it was possible to trace the process in its progression outward The cell proliferation penetrated and split up the elastic layer and infiltrated itself into the media In some instances the ends of the elastic layer were bent outward and the media had become so much weakened that a slight bulging in the artery was produced, so that there were appearances that could be likened to small aneurisms In addition to these intimal changes that leave no other interpretation regarding their origin open except that they are due to implantation of tubercle bacilli upon the intima, there are more diffuse changes which in many cases must be regarded as having proceeded from periarterial foci, on the other hand it may be concluded that at times they had proceeded from the endarterial lesions Tubercle bacilli were found in small numbers in the intimal lesions and frequently in immense numbers in the adventitial foci and in the walls of diffusely changed arterial segments Regarding the veins in tuberculous meningitis, the following broad statement can be made, viz That in every instance there is a marked, diffuse and extensive phlebitis, with giant cells and granulation tissue growing out into the lumen of the vein and causing there a parietal or, often, obliterating thrombosis

Experimental tuberculous meningitis has been produced by Deutschmann and Darenberg, and more particularly by Tedeschi The latter worker experimented with a large number of various kinds of animals, particularly rabbits, dogs and guinea pigs, and was able to produce a diffuse meningitis, usually accompanied by changes in the cord and brain But, inasmuch as no one seemed to have attempted to produce a tuberculous meningitis by means of direct injection of tubercle bacilli into the arteries, the following experiments were made

A suspension of tubercle bacilli in bouillon or in sterilized water was injected directly into the carotid artery of a rabbit and so far as the experiments have gone—they are not as yet concluded—it has been found that a meningeal miliary tuberculosis can readily be produced in the rabbit by this method On the other hand it has not been possible thus far to produce a typical meningitis in rabbits The lesion in rabbits simply takes the form of a miliary tuberculosis, without the exudate which is characteristic of tuberculous meningitis in man In the specimens which have been examined from rabbits the lesions have all been so large, that the exact relations of the process to the various layers in the arterial wall have not been demonstrable The lesions have been found in close connection with the arteries The arteries have usually been entirely obliterated by granulation tissue, but caseation had proceeded so far that the exact relation of the endothelial lining to the process could not be determined

The changes observed in the arteries in tuberculous meningitis may be summarized as follows There is found a primary tuberculous endarteritis which is due to a proliferation of epithelioid cells underneath the endothelium, between the endothelium and the elastic layer, this proliferation may extend to such a degree as to practically obliterate the vessel As it becomes advanced, leucocytes appear among the epithelioid cells, but in the early stages it consists of pure epithelioid cells, that is, cells with rather large bodies and small nuclei In addition to this primary tuberculous endarteritis there may be limited intimal tubercles These may be present singly or they may be present in conjunction with the diffuse endarteritis These intimal changes may proceed outward and invade the remaining coats of the vessels, and having reached the adventitia, the process may be spread throughout the meninges by means of the crebro-spinal fluid and the lymphatics

In addition to these changes we can trace from within, there are, of course, the better known and more extensive ordinary extra arterial or adventitial changes, which may proceed inward and invade all the coats of the artery, and produce also changes in the intima The changes in the intima produced in this way, however, are not so extensive nor so well marked as the primary intimal changes to which your more particular attention is directed

There remains to consider the origin of the epithelioid cells found in this sub intimal proliferation in tuberculous meningitis The authors, especially Baumgarten, as well as Brodouski, Guarnieri, Cornil and Hirschberg that have observed these changes and described them more or less fully, trace the epithelioid cells to the endothelium, and maintain that they are produced by the proliferation of the endothelial cells lining the vessel Baumgarten, in his classic work on histology of tubercle, maintains with reference to tubercles growing in the intima of the pulmonary arteries as well as elsewhere, that they are produced by proliferation of the endothelial cells

It will be observed that the appearances in the specimens presented are in direct opposition to these views of Baumgarten and others, because the specimens show the endothelium to remain intact and unchanged until caseation has commenced in the intimal tubercles, and then the endothelium is absent The shape alone of the epithelioid cells described does not allow any inference as regards their origin, but the fact that the endothelial lining remains absolutely undisturbed in the shape of a single layer covering the cells of the proliferation, seems to be a very strong argument against the theory that the epithelioid cells originated from the endothelium, because if the endothelium should proliferate, if, for instance, one single endothelial cell should divide it would result in the displacement of the cell with regard to its relation to the other cells constituting the endothelial lining of the vessel On the contrary, the endothelium remains not only passive, but even resistant to the process, because it is present even when the endarterial proliferation has reached such a degree as to bring the endothelial lining in contact in the central part of the vessel, as you will see in the specimens under the microscope Consequently the conclusion seems justifiable that the subendothelial proliferation of epithelioid cells that occurs in the tuberculous endarteritis of tuberculous meningitis does not come from the cells of the endothelial lining of the arteries, but more likely from the subendothelial connective tissue, which is present in such arteries, into which the tubercle bacilli, circulating in the blood, are forced, the bacilli passing between the endothelial cells which remain resistant to their influence until subendothelial caseation occurs

DISCUSSION

Dr J B Herrick—Mr President and Gentlemen of the Society—It was my privilege through the kindness of Dr Hektoen, a few days ago to read in full the paper of which he has given this admirable abstract After reading Dr Hektoen's paper, and noting the details of the histologic examinations, and after studying his drawings and the beautiful microscopic preparations here presented to us, one is forced to believe that his conclusions are warranted, and that we may look upon it as an established fact that there may be a primary intimal tuberculosis, as well as a primary infection of the vessel wall through the adventitial lymph channels

While Dr Hektoen's paper is one of a purely histologic and pathologic character, it is not amiss, I think, to call attention to certain practical results that follow directly from the knowledge that his investigation gives us In fact, we may say, in passing, that a purely scientific result, a result that is purely pathologic, histologic, or anatomic, is of very little positive value, unless something practical can be derived from the knowledge thus acquired, unless the result obtained helps us the better to understand the phenomena of health or of disease, or aids us in the rational treatment of bodily ailments

There are certain cases of tubercular meningitis that are sometimes spoken of as cases of anomalous or abnormal meningitis Hirschberg has collected the histories of these cases (Deutsches Archiv für Klin Med xli 528) In this anomalous form of meningeal tuberculosis, the onset is sudden and with symptoms that may resemble very closely those of cerebral hemorrhage The symptoms are focal There may be a Jacksonian epilepsy, a hemiplegia, an aphasia, and the practitioner's attention is scarcely called to the possibility of meningeal tuberculosis until after the lapse of several days when ordinary symptoms of a meningitis appear At the autopsy in these cases the amount of exudate may not be sufficient to explain the focal symptoms, nor are they explained by the presence of a large solitary tubercle, nor by ventricular exudate or by cerebral edema But there is an area of cerebral softening, usually on the convexity This softening is the direct result of the tuberculosis of the wall of some of the cerebral arteries The tubercular mass may bulge into the lumen of the artery and occlude it, or a thrombus may form at the constricted portion, the result in either case being a cerebral softening that may, in case the vessel is of sufficient size and without anastomosing branches, produce marked focal symptoms The process in this case would be a simple encephalomalacia

In a second group of cases this softened mass in the encephalon is itself tuberculous—tuberculous encephalitis And when we think that between the tuberculous mass in the wall of the artery and the lumen of the artery, there is in so many cases but the thin barrier of the layer of endothelial cells, it is a cause of wonder that oftener the mass does not break through the endothelial lining, in this way liberate into the blood current the bacilli, and flood the little area of the brain that is supplied by that artery, thus producing a localized tubercular encephalitis

In a third group of cases, the focal lesion may be a softening, the result of arterial occlusion through endarteritis obliterans induced by a neighboring subacute or latent tubercular process This origin of obliterating endarteritis is in accordance with the investigations of Friedländer Weintraud, to whom Dr Hektoen refers, reports a case of this kind A localized unilateral hyperesthesia and a monoplegia preceded for some days the onset of recognizable symptoms of tubercular meningitis of the meninges, and in its immediate vicinity an artery with marked endarteritis obliterans—no tubercle bacilli, no giant cells, but abundant young fibrous tissue—thrombosis, and resulting encephalomalacia

In cases, therefore, in which we can exclude a valvular disease, which practically excludes embolism, in cases where we can exclude an abscess or tumor of the brain, in young persons the walls of whose arteries seem to be perfectly healthy and not predisposed to hemorrhage, and particularly in a young person in whom we find some tubercular focus in lung, gland, or bone, we should always remember that a sudden seizure with hemiplegia, a monoplegia, a Jacksonian epilepsy, an aphasia, or some local sensory disturbance, in other words, a suddenly developing focal symptom, may be the initial symptom of a case that will later run the course of an ordinary tuberculous meningitis

Dr Gustav Fütterer—Dr Hektoen's paper is an excellent one and the microscopical specimens which he showed, proved conclusively every assertion made in his paper in all its details The fact that Dr Hektoen has made his examinations of the blood vessels of the pia mater in continuous series, gives him a valuable advantage, enabling him to form precise ideas on each tubercular change itself and on its relations to other tubercular changes surrounding it, that means here especially the relationship between the tubercular new formations in the tunica intima, the tunica media, and the perivascular sheath Dr Hektoen's opinion, that the miliary tubercle of the intima does not originate from the endothelial cells, but rather from the subendothelial layers, seems to be well founded and after examining his specimens, I rather believe, that in the near future, he will be able to furnish sufficient proof of this, because these blood vessels are the best material for such examinations, as the lamina elastica cannot furnish the material for the miliary tubercle and only the endothelial cells and the subendothelial layers have to be considered

Dr Hektoen has shown that the tubercle of the intima can be found in the majority of cases of tubercular meningitis and necessarily further anatomic and clinic inferences must be drawn from this Those tubercles—if located in smaller vessels, may cause obstructions, which, when present in arteries, will bring about an anemia of the parts which they supply, or if located in veins, a venous stasis will be followed by an atrophy, while a breaking down of those tubercles would cause a general miliary tuberculosis as Weigert has described it in similar changes of the veins of the lungs

As Dr Hektoen intended to deal with the endovasculitis and mesovasculitis, I will take the liberty to say a few words about the tubercular changes of the perivascular sheath, which are predominant in all cases of tubercular meningitis and deserve our due consideration A cross section of a blood vessel of the pia mater shows us a tube in a tube, the inner tube consisting of intima and media, the outer of adventitia and the space between both representing the lymphatic space The miliary tubercles are located on the outside of the perivascular sheath like beads around a ring, this is the case in the pia mater, where no resistance is offered to the growth of the tubercles in a peripheral direction Consequently, those will neither press on the perivascular lymph spaces, nor on the blood vessel itself, but we see their cells proliferate into the lymphatic space and infect the media, thus causing a mesovasculitis, which is of the highest clinic importance, as it causes a rigidity of the blood vessels, which prevents their full contraction and the proper propulsion of the blood current

In the brain substance the above described process is about the same, but the tubercles find a much greater resistance by the compact mass surrounding them and they grow in the direction of the blood vessel, which they compress and which thus becomes involved in the tubercular process much sooner than the vessels of the pia mater This involvement is then, as a rule, represented mainly by a mesoarteritis, or a mesophlebitis, while the lamina elastica forms a barrier against the infection from outside, even, as a specimen which I have with me will show you, until infiltration and pressure close the lumen of the vessel entirely This latter fact, together with Dr Hektoen's observation that the endothelial layer over the intima tubercle, remains intact, gives a further strong support for his opinion on the histogenesis of those tubercles

I said before that the rigidness of the vessels is of great importance, but this importance varies, according to the seat of the process and I would propose to classify as follows

1 If the diffuse process is located along some larger arteries, for instance, around the arteria fossae sylvii, a larger territory will be deprived of a part of its nutrition and anemia and atrophy may follow, as we find it in atheroma

2 The affection of small vessels of the pia mater causes atrophy of the marrow substance of the nerves, which we find in the outer portions of the cortex and a diffuse lessening of the same substance in the deeper layers of the cortex and of the adjoining portions of the white substance

3 If the vessels of the cortex are affected, the atrophies are comparatively small, on account of the rich blood supply of these parts, in which we find a dense net of small blood vessels, which has its smallest meshes wherever there are the most ganglion cells, so the ganglion cells are well supplied

4 On entering the marrow or white substance of the brain, the meshes of the capillary net become much longer and wider and the poor blood supply in those parts is easily disturbed by the vascular process described, the more so, as a total obstruction of vessels comes about so easy

Tuberculosis of the pia mater can heal I have examined a case of Leube, in which he had made the diagnosis of a tubercular mningitis and to his surprise the patient recovered Leube could not doubt his diagnosis Two years later the patient died of a tubercular cerebral meningitis I then made a detailed examination which revealed old cicatrized miliary tubercles along the vessels of the pia mater spinalis, sprinkled with calcareous deposits, the latter showing that the tissues were dead I have demonstrated those specimens in the Medico-physical Society at Wurzburg and have published drawings of them in the year of 1890

ASSOCIATION NEWS

The Rush Monument Fund

Received Oct 5, from Dr J W Russell	$ 1 00
Received Nov 6, from Newark, N J, Practitioner's Club (through Dr J D Brumley)	12 00
Received Dec 5, from Dr J B Hamilton, Chicago	43 00
Received Dec 10, from Dr J L Thompson, Indianapolis	5 00
Received Dec 14, from Dr J H Kellogg, Battle Creek, Mich	5 00
Received Dec 19, from Rush Medical College, Chicago	100 00
Received Dec 20, Interest	25 00
Previously reported	3,357 39
Total	$3,548 39

GEORGE H ROHE,
Secretary and Treasurer Rush Monument Committee
Baltimore, Dec 21, 1895

Amendment to the Constitution

(Offered by Dr H Bert Ellis, at the Baltimore meeting and by *inadvertence omitted from the minutes*)

Amend Article II, page 7 to read as follows Members by invitation shall consist of practitioners of reputable standing, not connected with affiliated societies They shall receive their appointment by invitation, etc

NECROLOGY

WILLIAM COMPTON, of Lancaster, Penn, December 15, of pneumonia He was born in 1825, at Cambridge, Lancaster County, was graduated from the Philadelphia Medical College in 1853 After serving as resident physician in one of the city hospitals, he went to Lancaster and began practice over fifty years ago, where he remained until his death He was at various times physician to the county prison and almshouse, coroner's physician and one of the local physicians to the Pennsylvania Railroad Company He had been president of the Lancaster County Medical Society and for many years was a member of the AMERICAN MEDICAL ASSOCIATION

SAMUEL FLEET SPEIR, M D, of Brooklyn, died December 19 aged 56 years, from hemorrhage of the stomach, probably due to a malignant growth affecting that organ and the liver He was a native of Brooklyn, the son of Robert and Hannah Speir On his mother's side he was a descendant of Captain Thomas Fleet, a retired Royal Navy officer, who settled on Long Island about 1660 Dr Speir received his medical degree at the New York University in 1860, taking the Mott gold medal, also the Wood and Van Buren prizes He was a thorough anatomist and for a time served as demonstrator at the Long Island College Hospital He studied abroad, after graduating, giving special attention to surgical clinics In 1864 he took the prize medal of the AMERICAN MEDICAL ASSOCIATION for an essay "On the Pathology of Jaundice" In 1871 he took the prize of the New York State Medical Society by an essay in which was described his device, called an artery-constrictor, for the arrest of surgical hemorrhage without the use of a ligature In the same year he read a paper before the New York Academy of Medicine on the microscopic differentiation of morbid growths He was physician to the Brooklyn Dispensary curator, microscopist and surgeon to the Brooklyn Hospital, also surgeon to the Eye and Ear Infirmary He was one of the originators of the Seaside Home for children and a benefactor of many charitable undertakings He was a collector of exotics and other rare plants, and was a lover of fine dogs and Alderneys His kennel of hunting dogs had many a prizewinner He was a member of a number of medical and social clubs and societies, and the founder of one of the best of the sportsmen's seaside homes, known as the Robins' Island Club He leaves a widow and one daughter

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SATURDAY, DECEMBER 28, 1895

FILTRATION AS A MEANS OF IMPROVING THE WATER SUPPLY OF CITIES AND TOWNS

A long step in the settlement of this important question has been taken by the State Board of Health of Massachusetts By the Legislative act of June 9, 1893, the State Board was directed to "investigate, consider and report upon the question of a water supply for the city of Boston and its suburbs within a radius of ten miles from the State House, and for such other cities and towns as in its opinion should be included therewith"[1] The result of the act, was the production of the exhaustive report of February 7, 1895

In that report filtration of Merrimac water was considered as less desirable than to introduce a satisfactory water from another source The report states (p xv) "Examinations have also been made with the view of taking the water of the Merrimac River above Lowell, subjecting it to efficient filtration and bringing it down to the metropolitan district The quantity of water that could be obtained in this way and for this purpose is unlimited, and if there were no way of obtaining a better supply of water and one which was above suspicion, it would be practicable to introduce water from that source at a cost somewhat less than from any other source considered

"The estimated cost of filtering and conveying this water to the metropolitan district is $17,500,000, but in the opinion of the Board it will be better to pay 10 per cent more from a source that is not polluted The experiments carried on by this Board for a succession of years at an experiment station in Lawrence under the immediate direction of H F Mills, C E, a member of this Board, and the filter constructed in connection with the waterworks of that city, have shown that waters as polluted as those of the Merrimac can be effectually filtered and rendered safe for domestic use, but it is also true that filtering areas require continuous care on the part of trained attendants, and that in a few instances at least, inefficient administration or inherent defects of construction have allowed disease germs to pass through filters which were assumed, by good authority, to be a sufficient protection We are the more easily led to reject the filtered waters of the Merrimac because we have found an entirely satisfactory water in the south branch of the Nashua River above the city of Clinton"

The report further states (p 104) "The most feasible way of purifying a water like that of the Merrimac River is by filtering it through sand, a method which has been tested at the experiment station of the State Board of Health at Lawrence for many years, and has been in actual use for filtering the public water supply of this city for more than a year At this place a sand filter was completed and put in operation in September, 1893 It has an area of two and one-half acres, and consists of a bed of sand about five feet thick, through which water is filtered at a rate not exceeding 2,000,000 gallons per acre per day The sand was very carefully selected with a view to having its grains of such a size that they would remove from the water the germs of typhoid fever The practical results obtained with this filter have been very satisfactory, indeed, as there has been a very great reduction in the death rate from typhoid fever and some other diseases in Lawrence since it was put in operation"

This system was devised by the Board in 1890, and was the result of "strenuous efforts to produce a filter that would remove all disease-producing germs that could be applied to it, and at the same time filter rapidly enough to serve for a city's water supply Billions of typhoid germs were cultivated and applied to filters of different construction, and in 1891 we succeeded in removing all that were applied when filtering 2,000,000 gallons per acre daily[2]

In the current annual report the Board practically concludes the subject by the details of its experiments extending over a period of seven years and including the results of more than thirty thousand bacteriologic analyses[3] After considering the subject of the filtration of sewage, the report continues the discussion of the great hygienic problem of purification of the sewage-polluted waters of the State by sand filtration The statistics of the work of thirty experimental filters are given, in addition to those of the large filters at Lowell For the sake of greater accuracy the report uses some new technical expressions which are self-explanatory

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[1] Report of the Massachusetts State Board of Health upon a Metropolitan Water Supply, Boston 1895

[2] Annual report Massachusetts State Board of Health 1893, p 546

[3] Annual report Massachusetts State Board of Health, 1894, pp 575–710

a Bacterial efficiency
b Bacterial purification
c Hygienic efficiency

"The question of hygienic efficiency of filtration," says the report, "in a great majority of cases is the vital one to be considered" The subject is concluded by an interesting paper by MR H W CLARK on the physical and chemical properties of sands with special reference to the filtration of water, in which some of the facts that have been brought out by the long continued observation are reported

As to intermittent and continuous filtration, the Board says, p 653 "Intermittent filtration is successful in the chemical purification of all waters containing ordinary organic matter Chemical purification by continuous filtration is successful only *in the case of those waters which do not contain* organic matter in excess of a certain limit determined by the relation of the organic matter to the free dissolved oxygen, which is limited in quantity by the saturation point" The Board, however, goes further than this (p 645) "It may be stated that so far as the amount of ordinary organic matter and free oxygen are concerned, satisfactory *bacterial* results may be obtained under proper conditions from the intermittent filtration of any water even when its composition approaches that of sewage"

It is quite clear from an examination of the investigations of the Board that filtration under such conditions as those in operation at Lowell, is a hygienic measure of the highest importance, and it is not probable that in this country generally we shall ever attain the best results that applied hygiene can furnish until the rule is absolute, that all public water supplies shall be filtered It seems, too, that the "bacterial efficiency" and "bacterial purification" of water filters increase with age (p 597), a rather important fact in its bearings upon the economic value of a proper filtration plant

To those municipal authorities engaged in the study of this question, we commend the careful examination of the 1894 report of the Massachusetts State Board of Health as the most exhaustive, thorough and complete report on the subject

HEREDITY IN RELATION TO INSANITY AND IDIOCY

The opinion that a neurotic inheritance is the chief predisposing cause to insanity is now very generally held Some alienists are disposed to go even further, and declare that it is mainly to the orignal constitution of the brain that we must look for the first and chief cause of mental breakdown, the ordinarily assigned causes being none of them, in themselves, sufficient to bring on insanity It can scarcely be called into question that what is called rather indefinitely "the neurotic inheritance" does render the brain more liable to be affected by such proximate causes, and the belief is now general that, whether we can discover the fact of such inheritance by outward and visible sign or not, its existence and evil influence are indisputable Indeed, the opinion has by a recent writer been rather dogmatically expressed in the statement that "the condition common to all mental disturbance is to be sought in inherited and inherent brain-defect" This is exclusive of the forms known as septic or toxic insanity and those instances of aberration of mind symptomatic of cerebral exhaustion, traumatism, and other pathologic lesions

In view of the present etiologic importance assumed by this neurotic inheritance, or hereditary predisposition, it would be well to define this condition and determine its definite relationship to insanity and idiocy The views of a distinguished German alienist are pertinent to this consideration and may be briefly quoted In the preface to his work on Psychiatry, *PROF THEODOR MEYNERT* expresses dissatisfaction with the statistical method, which, in his opinion, has laid inordinate stress upon hereditary predisposition, and which broadly teaches that predisposition itself is a form of disease and not a condition antecedent to it Nor is he content to accept what he terms the "mystical conception of heredity," but he insists upon certain anatomic peculiarities in patients which constitute this predisposition The existence of such peculiarities are to be inferred not only from symptoms and external signs, but also from due consideration of all abnormal proportions of the body The doctrine of heredity, according to MEYNERT, is carried to an extreme in the assumption of the existence of innate ideas and, in clinic medicine, has led to the erroneous theory of moral insanity With DUBOIS REYMOND and WEISSMAN, he criticises DARWIN's theory of acquired faculties, and quotes approvingly WEISSMAN's words, "Talents do not depend upon the possession of any special portion of the brain, there is nothing simple about them, but they are combinations of many and widely different psychical faculties" At the same time, MEYNERT fully recognizes the possibility of an abuse of the doctrine of inherited anatomic peculiarities and of hereditary predisposition, even from the standpoint of actual fault of organization as its tangible basis, on account of the constant suspicion of mental defect attaching thereto But he reminds thinking physicians that they may avoid this danger by distinguishing between the many who are possibly called to disease and that fortunately smaller number of persons, who are, in the saddest sense of the term, chosen for disease

The following conclusions upon this subject have been formulated at our request by DR JOHN B. CHAPIN, a distinguished American authority, now in charge of the Pennsylvania Hospital for the Insane at Philadelphia

1 Physical characteristics, those distinguishing the human species for instance, are transmissible by inheritance

2 Knowledge, genius, culture, being dependent on the influences of education and environment upon the individual, are not transmissible, but what may be termed mental receptivity, and degrees of cerebral evolution and development, may be inherited Psychic qualities are not necessarily an inheritance, as they require favorable surroundings and circumstances for their growth and development

3 Insanity, as a disease, is not transmissible by inheritance but may be acquired or evolved, especially where a neurotic heredity exists as a basis

4 A neurotic predisposition is transmissible by inheritance, but there is no absolute rule that it will be transmitted in every case

5 As regards the formation of a neurotic heredity, the in-breeding of neurotic temperaments is most conducive to its creation

6 Idiocy and imbecility may be the resultant of certain defects having origin in consanguineous marriages, in pre-natal conditions, accidents, arrested cerebral development, infantile meningitis, tuberculosis, and lack of potency on the part of one or both of the parents from unexplained causes

Premature closure of the sutures in the cranial vault has also been recognized as a cause of imbecility, and for the relief of this condition linear craniectomy has been proposed and performed, without, however, a gratifying amount of success Indeed Bourneville asserts that the theory of Lannelongue in regard to craniotomy in microcephalus has no anatomic and physiologic basis, in fact, and that the operation should be banished from the list of justifiable surgical procedures It is clear that a distinction is to be made between those microcephalic cases in which there is premature synostosis with arrest of cerebral development, and those in which the head is small because the brain itself is small Among the unexplained causes of lack of potency on the part of one or both parents alcohol may be placed, according to very prevalent popular belief Not only may the mental endowment of the child be unfavorably influenced by acute alcoholism at the time of conception, but also the cerebral changes and nerve degeneration, and inflammation, resulting from chronic alcoholism are distinctly prejudicial, from the standpoint of heredity

To broach the topics of degeneration and atavism would take us beyond the limits of the present article, although they are closely related to the subject of the relation of heredity to insanity and idiocy But to sum up the foregoing, it is evident that Meynert recognizes an anatomic peculiarity, which may or may not manifest itself by symptoms of aberration Chapin holds that neurotic instability may be transmitted by inheritance, yet it is capable of exerting only a potential influence in the later development of mental disorder, which may be evoked by social condition, environment, or pathologic changes in the cerebral cortex Imbecility and idiocy, however, may directly result from defective cerebral development or pre-natal disease

The whole subject of the etiology of insanity is a complex and difficult one, and, as pointed out by Holland some fifty years ago in his "Medical Notes and Reflections," it is rendered more abstruse by the fact that the pathologic change may be so minute as to defy the search of the pathologist, although sufficient to produce disturbance of intellection, while, on the other hand, great organic changes in the brain are not incompatible with the occurrence of a lucid interval, which, if we are not on our guard, may lead us to entertain false hopes of recovery

THE ANTISTREPTOCOCCIC SERUM

Marmorek, in a recent article,[1] gives the results of his experiments in obtaining a serum with which to combat infection by streptococci The microbe loses its virulence very rapidly when cultivated in artificial media, hence his first effort was to secure a suitable culture medium It seems to grow most favorably in a mixture of two parts of human serum with one part of beef bouillon As the former is difficult to obtain, ascitic fluid was used and finally one part of this fluid and two parts of the bouillon adopted To enhance the virulence of the microbe, the author first made a culture of streptococci from an angina in bouillon, then blood, taken from a rabbit killed by intravenous injection of this culture, was inoculated from the same culture Part of this was injected into another rabbit, which died in eighteen hours, another culture made and injected into a third rabbit, which died more rapidly, and so on Finally, by successive passages, Marmorek obtained a microorganism of such extreme virulence that a culture in the dose of one one-hundred-millionth of a cubic centimeter was inevitably fatal Having obtained these results, and the streptococci found in the human organism being identified, the next step was to obtain immunity in animals Several methods have been suggested, among them injection of cultures sterilized at 120 degrees, or injection of living and very virulent cultures The author made use of the latter methods Efforts are made to immunize the largest animals—the ass, horse and sheep The ass bears the inoculations very badly Whichever animal is selected a very small dose must be used to commence with, for one cubic centimeter will produce a marked reaction, the quantity may be increased slowly, but it takes a long time to secure the inoculation—at least six months Horses immunized against diphtheria support these inoculations better than fresh animals It is possible that serum may be produced which is both antidiphtheritic and antistreptococcic Three or four weeks must elapse after the last inoculation before the serum is used, so as to be sure that all reaction has subsided It will be noticed that there is a marked difference between this method and that of Behring and Roux The latter authors use toxins and not virulent antitoxins Marmorek has been unable thus far to isolate the streptococcic toxins, and serums collected from animals inoculated progressively with filtered or sterilized cultures does not possess very manifest antitoxic properties

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[1] Ann de l Inst Past, 1895, No 7

The preventive process of the serum is well marked in animals For instance, a rabbit weighing 1,500 grammes and given an injection of 0 c c 2 of the serum will, in twelve to eighteen hours, withstand a dose ten times the mortal one of the streptococcic virus In the various streptococcic affections of human beings, the serum has not given satisfactory results as yet Thus in erysipelas, injected in the dose of 10 to 20 c c, according to the gravity of the case, it seemed to produce an amelioration of the general state In 413 cases the mortality was 3 87 per cent, which is but little less than that usually found—5 to 6 per cent

Roger read a paper on "Immunity Against the Streptococcus" before the French Congress of Internal Medicine Two principal theories have been advanced, he says,[2] to explain immunity One invokes the phagocytic action of the leucocytes, the other the bactericidal power of the fluids The previous researches of this author did not seem favorable to the last hypothesis He showed that microbes developed with the same facility in the serums of vaccinated as in that of fresh animals Pursuing his studies he found that microbes from the serum of vaccinated animals had lost the greater part of their virulence—they were attenuated The results obtained in these experiments were disputed It was said that the author's cases showed not an attenuation but a therapeutic action exercised by the serum which was injected at the same time as the microbe

In order to convince the skeptics Roger undertook a new series of experiments, which he asserts refutes all objections He inoculated three rabbits One received a culture of streptococci and succumbed in three days, the same received the same quality of the culture, but one c c, of serum was afterward injected, this lived five days, the third animal was given the same amount of culture and serum, but after being mixed it either lived or died very late Hence the serum does not act on the organism, it acts on the microbe M Roger, who was the first to point out the value of antistreptococcic serum, does not deny its therapeutic effect, but believes it is due to the attenuating action The attenuating property does not belong to the serum only, it is found in the blood circulating in the vessels Repeating the experiments made in the serum by using blood transfused so rapidly (15 or 20 seconds) that it had no time to undergo the least alteration, exactly the same results were obtained These experiments clear up the mechanism of immunity It can readily be conceived that microbes coming into the vaccinated blood rapidly lose their noxious action by becoming an easy prey for the phagocytes

THE JOURNAL IN 1895 AND 1896

At the close of another year of the Journal's existence it is fitting that a few words should be said as to its past and its prospects for the future This is a custom that is honored in the observance, when it can be well done and there is a creditable past to review, and a future for which an honest promise of still better things is possible

The Editor of the Journal feels no hesitancy in referring to its past from the day of comparatively small things in its incipiency, to the present, when it is unquestionably the largest medical publication in this country and is only exceeded by two or three in other lands In the present half-yearly volume there are nearly twelve hundred pages of closely printed matter, and while mere bulk is not in itself a merit, it is believed that the quality of the contributions and other literary material has been, on the whole, not inferior to that in any other medical periodical The Journal is now in a position to command the best scientific thought in the medical profession in this country, as a glance at the list of contributors will show A review of the work of the Sections as at present organized in the Association, will demonstrate that, from that source alone, a very large number of papers from the leading men in each specialty of medicine have the Journal as the medium of their publication It is believed that with the plans now adopted, and with its daily increasing circulation (over eight hundred increase during the past year), the Journal will become more than ever the choice of the leaders of medical thought, both through the Association and otherwise, for communicating their ideas and discoveries to the profession While it is the organ of no specialty and neglects no branch of medical science, it has probably had during the past year in its columns more original articles on certain special departments of medicine, than have appeared in some journals devoted to them alone within the same period

A special effort has been made to report as fully as possible the proceedings of the higher grade of medical societies, more especially those which, notwithstanding the merits of their papers and discussions, are not so likely to receive adequate notice from the leading journals of the Eastern section of our country The JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION belongs to no section and has not limited itself in this respect to any particular region of the United States, but it is natural and appropriate that it should give some special attention to medical matters in the great central region which comes less directly under the view, in this respect, of the widely circulated medical periodicals of the East

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[2] Le Bulletin Med 1895 No 78

In its editorial columns it has been the aim to present living questions in medicine in a judicious and, on the whole, a conservative way, especially where there is room for reasonable differences of opinion While this conservatism at times may not accord with the individual views of members of the profession, it is believed to be the wisest policy and it has been abundantly justified by events in the past Enthusiasm is an admirable thing in medicine as elsewhere, but the scriptural injunction to prove all things, is in medical as in religious matters an essential preliminary to holding fast that which is good The Hippocratic maxim that "experience is fallacious" is our surest protection against going wild over "*propter hoc*" cures

A good weekly medical journal is an essential to the progressive practitioner of medicine, it is only by such an aid that he can keep in touch with the scientific advance of his profession Text-books, hand-books, systems of medicine, and cyclopedias all begin to deteriorate as scientific guides from the date of their publication, but a good medical weekly is always at the front line of medical progress It is the aim of the JOURNAL to be behind none of its contemporaries, as an exponent of the actual state of medical science throughout the world

The promise for the future must be taken from the performance in the past The JOURNAL will take no backward steps

CORRESPONDENCE

Shall We Continue to Sterilize Milk for Infants

To the Editor —Your editorial under the title "Overdone Sterilization," in the issue of December 14, appears to me very timely As an early, consistent and persistent advocate of the germ theory in connection with many diseases, I yet feel that we are too much in danger at the present time of forgetting that there are other causes of disease than micro-organisms The possibility that the exclusive use of sterilized milk as a food for infants, while it would avoid the dangers arising from the occasional presence of the bacteria of typhoid fever tuberculosis and other infections, may prove a serious obstacle to assimilation and nutrition and thus lead to the development of rachitis, scurvy and other allied conditions of mal nutrition, as suggested in the recent article of Dr Starr, to which you refer, was pointed out by me in a paper read before the meeting of the American Orthopedic Association, at Washington, D C, May 30, 1891, on the subject of rachitis I quote from this paper as follows

'*In conclusion I would call attention to the fact, which I think I have observed, that rickets and its congener scurvy in infancy, have within the past few years been decidedly on the increase In point of fact, if one looks over the textbooks on the diseases of children written forty or fifty years ago, he will fail to find the slightest reference to the last named disease And this notwithstanding the fact that our fathers in medicine saw it twenty times in the adult where we see it once Manifestly it was not for want of familiarity with its symptoms that they failed to recognize it as one of the infantile diseases Indeed we need hardly go back more than ten years to find medical literature barren of allusions to this subject To what are we to attribute this somewhat sudden increase in diseases of defective nutrition? Is it simply a coincidence that this condition has devloped simultaneously and pari passu with the introduction of the practice of the sterilization of milk? One curious feature of this increased development of these affections is that we meet it not among the poor, not among those whose hygienic environment is faulty and whose food supply is insufficient or of inferior quality, but among the children of the wealthy who live under the most favorable conditions with strictest attention to hygienic precautions and an abundant supply of the richest milk Let us consider for a moment the part which ferments play in the preparation of food for digestion and assimilation We know to how great an extent the digestibility of the great staple of life, bread, is increased by the development in the flour of the saccharomyces cerevisiæ, how beer in its various forms becomes a wholesome drink through the action of the same ferment, how the vinous fermentation furnishes us healthful beverages and useful stimuli and how the acetic fermentation supplies us a most valuable condiment We also know that of all the ferments none approaches so near the fluid known as the gastric juice as lactic acid We know what a wholesome and nutritious article of diet milk becomes in the shape of curds and whey, buttermilk cheese and matzoon, after having been acted on by the lactic acid ferment We know that under all ordinary conditions milk contains the lactic acid bacterium Now is not the supposition warranted that up to the point when this ferment has been developed in milk to such an extent as to produce an acid taste which leads most persons to dislike it, its action on that fluid may be in the highest degree favorable to its digestibility and assimilability? Moreover, may not the lactic acid have a very important function in taking up the lime salts and, in combination with phosphoric acid, putting them in condition to be absorbed by the lacteals and appropriated by the system The fact that sterilized milk is indigestible no one questions May we not be denying our infants some of the most important of the constituents of milk, allowing them only the fats while we deprive them of the salts? To atone for presenting them a less digestible milk we pre digest it before giving it, thus depriving the stomach of the natural stimulus afforded by the presence of food requiring digestion, discouraging the secretion of the gastric juice, and still further interfering with the assimilation of the mineral constituents Do we not perhaps need to revise our recent conclusions on the subject of infant diet and sterilization of milk?*'

I observe that that eminent authority, Prof A Jacobi, in the leading article of "Pediatrics" for January, 1896, in which he reviews the question of infant feeding at length, while urging the importance of the sterilization of milk in the strongest possible terms, yet calls attention to the fact that "sterilization has been claimed to be no unmixed boon because of its changing the chemical constituents of milk"

In speaking of the method of Dr Rotch, which consists in sterilization, mechanical separation in order to remove impurities, and remixture of the milk and cream, he says

"I know of a number of babies who in health and disease have done well on the protracted use of the laboratory milk Only one observation struck me in a few cases The formation of the muscles and part of the bones appeared to be slow, the teeth came a number of weeks or even months too late the cranial bones turned slightly soft in a few instances In a few such cases I had to add animal broths or juice before the usual time, in one I tried phosphates, (elixir phosphori) which was rejected, in others it was well borne and useful"

For myself I am not prepared to admit that the lactic acid ferment is, up to a certain point, injurious, or indeed that it may not on the other hand be essential to the full digestion and appropriation of milk It is a well known fact that certain tribes in Africa who subsist largely on milk never, under any circumstances, drink it until it has begun to sour, their experience having taught them that the use of fresh milk is very apt to result in the development of fevers When circumstances, such for instance, as residence in large cities, make it necessary to adopt means to prevent the lactic acid fermentation from proceeding to the stage in which an acid taste is developed, up to which time I believe the process to be beneficial, I should much prefer boiling to sterilization or Pasteurization, for the reason that I believe that in this way the destruction of morbific bacteria will be more completely effected, and also that changes of a protective nature will be produced in the dead bacteria and ptomaines with which the milk is loaded after sterilization In this suggestion I feel that I am supported by the experience of Professor Jacobi, who, after saying, "virtually sterilization" (that is to say by means of boiling) "has been practiced by me these more than forty years, and has been taught by me these thirty-five years both in lectures and in books and essays," adds "I always urged that safety increased with the number of boilings ' No doubt he was led to give this advice in consequence of carefully observed results of the benefits following repeated boiling as compared with a single boiling And this leads me to say in conclusion that the great danger of modern medicine appears to me to be the tendency to push theories to an extreme, and to disregard the teachings of experience No better proof of the existence of this tendency could be advanced than is found in Professor Jacobi s allusion to the advantage of the admixture of cereals for the purpose of finally dividing and suspending the casein of cow s milk in preparing it for digestion by the infant stomach As we well know it is not many years since we were assured in most positive terms that it was utterly impossible for a young infant to digest farinaceous food at all, and our theoretical teachers instructed us to banish it entirely from the infant ietary He calls attention to the fact that the researches Schiffer, Korowin and Zweifel have experimentally proved diametric contradiction to the statements of previous experimentalists, that a certain amount of starch can be digested by the saliva and pancreatic juice of young infants, and that Heubner of Berlin recommends in intestinal diseases of the very young the simplest flours, mainly of rice and oats, which have a finer microscopical structure than wheat "Practical experience, ' says Heubner, "surpasses theoretical conclusions

Jacobi in a foot note ventures the prediction that "before long more than to day it will be a generally accepted axiom that cereals must be given to make teeth when milk food alone does not suffice for their development

My own advice to mothers unfortunately compelled to nourish their infants artificially, if they are able to obtain pure milk, from cows of authenticated good health, and from dairies where proper sanitary precautions are known to be taken and are able to use the milk within twelve hours after milking and after very limited transportation, is that they should keep the milk in hermetically sealed jars and in a cool temperature, but should not subject it to Pasteurization, sterilization or boiling Under other conditions namely those of protracted transportation, prolonged exposure to high temperature, ignorance of the conditions of health of the cow or of cleanliness of the dairy, they should resort to boiling in preference to sterilization or Pasteurization It is possible that the boiled milk will tend somewhat more to induce constipation than will the sterilized milk, but this is a trifling objection which can easily be met

Benjamin Lee, M D

Successful Implantation of Teeth

Alma, Mich, Dec 18, 1895

To the Editor —My little daughter, aged 2 years and nine months, fell headlong down the cellar stairs and struck the two upper middle incisors on the edge of the step, extracting them as completely as if by forceps The alveolar processes of the right tooth were fractured and the gum lacerated the entire length of the root After the fright and the crying, which continued a half hour or more, the child was rocked to sleep in her mother's arms and placed in her buggy We found the teeth on the cellar steps uninjured They were placed in a normal saline solution of tepid temperature On the arrival of an assistant with the chloroform for anesthesia, the child was sleeping quietly Chloroform was administered without the child awakening and the teeth were placed within their sockets and pressed into position, the edge of each tooth fitting firmly in a groove of one blade of a forceps, the hand of the operator being placed on the back of the head with the pressure properly directed The gums about were cleansed antiseptically and the teeth left in position without further dressing or application

The accident occurred about 2 o'clock and when the child awoke from her sleep at 5 30, her teeth were in place The teeth had been out of the mouth fully one hour Milk and soft food were administered and the lacerated edges of the gums cleansed after the eating Healing of the gums occurred by first intention

It is now over four weeks since the teeth were placed and they are now solid, in good position and of normal color The gums are normal in color and consistency and the appearance of the mouth quite natural

I report this as a successful case of transplantation of teeth that had been out of the mouth over an hour and as another demonstration of chloroform anesthesia during natural sleep

E S Pettyjohn, M D
Medical Superintendent

It Was Hot Springs

Tennessee State Board of Health, Nashville, Dec 20, 1895

To the Editor —On page 1000, December 7, Journal of the American Medical Association, second column, line 10 (from bottom), "Little Rock ' should read "Hot Springs Much fault is found with me because of this error It is proper to state that I read no paper, only said a few sentences in a conversational way No proof of the proceedings was sent me, as should have been done The error is doubtless that of the reporter You know too well how these things happen Please make necessary correction, and oblige,

Very respectfully,
J Berrien Lindsley, M D
Secretary and Executive Officer

Defense of Hypnotism

Cleveland, Ohio, Dec 20, 1895

To the Editor —I have read with much surprise the note to you from Dr W P Howle, Oran, Mo, published in the issue of the Journal of December 14, in which he condemns hypnotism, along with the fallacies of clairvoyance, faith cure, etc, which intelligent men know to be frauds But, Doctor, in the light of my extensive experience in regular practice, where I have hypnotized 1,000 cases never once having failed to produce hypnosis where I made the attempt, I must protest against such indiscriminate and uncalled for condemnation of a great remedy in many cases which can not be rationally or successfully treated by other means If you are ready for it I will prepare a paper for your next issue, dissecting this remarkable set of statements Kindly advise me

Truly, M Maurice Carnes, M D

Papers for the Surgical Section

South Bethlehem, Pa , Dec 18, 1895

To the Editor —As Secretary of the Surgical Section of the Association, I am now engaged in arranging a program for the Atlanta meeting We have selected "The Surgery of the Cerebro spinal Axis and its Bony Encasement, as the special subject for discussion I am anxious to obtain as full and as representative a discussion on this important subject as practicable Will you permit me through the Journal to call the attention of our surgical members to this subject, and to request from them a liberal contribution of papers, and careful preparation for discussing the subject Besides this special subject there will be room on the program for papers on other subjects I solicit the active assistance and contribution of the members Members who desire to contribute papers to the Surgical Section will please notify me and send the title of their papers to me as soon as practicable Very truly yours,

W L Estes

International Scientific Language

Chicago, Dec 21, 1895

To the Editor —I have read with great interest your address on "The International Scientific Language' in the Journal of this date The position taken with regard to French seems to be good although as a matter of fact, Spanish is an easier language even than French and is now used by a greater number of people than any other language excepting English

Would it not be well, as a means of familiarizing the profession at large, in this country, with one of these languages, to have a page or two of the contents of the Journal, each week in the proposed International language?

Very truly yours,

W S Christopher

BOOK NOTICES

State Charities Aid Association of New York Handbook for Hospitals By Abby Howland Woolsey Third Edition 12mo, pp 267 New York and London G P Putnam's Sons, Chicago The W T Keener Co 1895

The first edition of this Handbook was published by the Association in 1877 and the second edition in 1883 No recent work having been found that would supply its place the managers of the Association appointed a committee to revise it, Miss Woolsey having died since the appearance of the edition of 1883

This committee consisted of Drs Charles Hitchcock, George G Wheelock and W Gill Wylie

"Not often,' say the committee, "has a work so easy or so grateful been assigned to any committee Twelve years have elapsed since the publication was last revised by the author, and yet the work done was so thorough, the personal knowledge of the subject so exceptional, and the standard of excellence so high that, beyond the bringing of statistics up to date, and the addition of some footnotes to show the advance, within a very few years, of hygienic requirements, there were but few alterations to be made"

We have been familiar with the former editions of the book, and we concur in the opinion of the committee that "every commissioner of charities and superintendent of the poor, every superintendent of a hospital, will welcome the many practical suggestions to be found in this volume It should be in the hands of all visitors to hospitals and other charitable institutions and on the shelves of every library in this country"

Twenty-Sixth Annual Report of the State Board of Health of Massachusetts 8vo, paper, pp 892 Boston 1895

The reports of the Massachusetts State Board of Health are without doubt the most valuable sanitary publications in the country, and they afford not only an *object* lesson for other State Boards, but they demonstrate the enlightened character of the legislation under which they are produced In another column we refer to one important inquiry in which the Board has been engaged, but it would be quite within bounds to say that within the pages of the twenty-six volumes are included luminous discussions of nearly every topic of hygiene that is of interest to the municipal sanitarian The present volume is of exceptional interest

Practical Uranalysis and Urinary Diagnosis A Manual for the Use of Physicians, Surgeons, and Students By Charles W Purdy, M D , Queen's University, Fellow of the Royal College of Physicians and Surgeons, Kingston , Professor of Urology and Urinary Diagnosis at the Chicago Post Graduate Medical School Author of "Bright's Disease and Allied Affections of the Kidneys' , also of "Diabetes Its Causes Symptoms, and Treatment ' Second revised edition With numerous Illustrations, including Photo Engravings and Colored Plates In one crown octavo volume, *360 pages, in extra cloth, $2 50 net* Philadelphia The F A Davis Co , Publishers, 1914 and 1916 Cherry Street Chicago office, Lakeside Building

In our notice of the first edition of this work (Nov 24, 1894, p 805) we said, "To the practitioner and as well to the clinician, this book must prove invaluble for the extent of information contained in its pages, and its practical character The author has "corrected all discovered errors' in the first edition, has revised it and has added several illustrations The early call for a new edition is a tribute to its scientific accuracy, and we congratulate the author on the merited appreciation of the book by the profession

Pregnancy, Labor and the Puerperal State By Egbert H Grandin, M D , Consulting surgeon to the New York Maternity Hospital Consulting Gynecologist to the French Hospital, New York , etc and George W Jarman, M D , Obstetric Surgeon to the New York Maternity Hospital, Gyecologist to the Cancer Hospital, New York, etc Illustrated with forty-one original full-page photographic plates from nature Royal octavo, pages viii, 261 Cloth, $2 50 net Philadelphia The F A Davis Co , Publishers, 1914 and 1916 Cherry Street Chicago office, Lakeside Building

This work, say the authors in the preface, aims at being a guide to practice and is clinical in its teaching There are three parts, of which one is given to pregnancy, containing three chapters, the second to labor, containing four chapters, and the third, on the puerperal state, is disposed of in two chapters The photographs are excellent and the text instructive It is a faithful representation of the modern practice of obstetrics

Ohio State Medical Society —Transactions of the Semi-Centennial meeting held at Columbus, May 15, 16 and 17, 1895

This volume shows that the society is keeping up to its usual high standard of work There are valuable papers on diphtheria, influenza, autopsies, intestinal surgery, typhoid fever, leprosy, and these papers are discussed in an able manner Appended is a copy of the Mosworth Bill to regulate the practice of medicine, which the society indorsed, and which has also received the *indorsement* of the Ohio State Eclectic Society and the Ohio State Homeopathic Medical Society The whole profession is in support of this bill, and as there are eighty physicians in the House of Representatives, it is confidently expected the bill will *become* a law The society is to be congratulated on its good work, its vigorous life at 50 years and its chances for the future

Lectures on Appendicitis and Notes on Other Subjects By Robert T Morris, A M , M D Illustrated 8vo, cloth pp 163 New York and London G P Putnam's Sons 1895

The first eighty-three pages of this book are given up t the lectures on appendicitis, and the remainder to notes o various surgical topics, mainly reports of interesting cas They all show excellent surgery The illustrations of th vermiform appendix in the first section of the work could no well be improved upon

Announcements

"The College and Clinical Record" will be hereaf known under the name of *Dunglison's College and Clin Record*, a Monthly Record of Practical Medicine'

The *American Medical Review*, edited by Dr Daniel Lewis and Dr George B Bradley, and published in New York, made its first appearance last week

The *Medical News* of Philadelphia will be edited and published in New York after January 1, 1896

PUBLIC HEALTH

Typhoid Fever in Ohio.

Ohio State Board of Health Office of the Secretary
Columbus, Ohio, Dec 21, 1895

To the Editor —Owing to absence your letter of the 17th just received I returned from the smallpox district yesterday and am going back there again to day In Bridgeport and immediate vicinity there were up to yesterday morning twenty-eight cases At Martin's Ferry, which is a separate corporation but practically the same community, there were forty-eight cases There is one case at East Liverpool and one case at Lisbon These two latter cases contracted the disease at Martin's Ferry The disease was not introduced by emigrants, but is due to a negro having smallpox who was landed at Wheeling early last fall

The disease was started in Wheeling and ran several months, but has been suppressed there It crossed the river to Bridgeport and Martin's Ferry, which are in Ohio opposite Wheeling and connected by street car lines Our Board has now put in force proper regulations for preventing further spread of the disease, and these are being strictly carried out General vaccination is being carried out by house to house visitation by physicians I confidently expect that the disease will soon be under control

Yours truly, C O Probst, Sec'y

The New York City Board of Health —The Board of Estimate of the City of New York has appropriated $519,508 for the Health Department's operations in 1896, which is an increase of $59,000 as compared with the current appropriation This increase is, partly at least, believed to be rendered necessary by reason of the new and expensive work done by the Bacteriologic Bureau, in the production of anti diphtheritic serum

Typhoid in Wisconsin —At a meeting of the State Board of Health of Wisconsin December 19, a statement was made that the number of cases of typhoid fever reported to the Board since July 1 throughout the State was 625, of which 133 were reported in Milwaukee, 115 in Superior, seventy-four in Shell Lake, fifty-two in Ashland and twenty-four in La Crosse The causes of the prevalence of the fever were invariably due to the use of contaminated water Plans were submitted for the proper filtration of Ashland's water supply, and a committee of the Board will go to that city to look into the matter

Health Reports —The following health reports have been received by the Supervising Surgeon-General Marine-Hospital Service

SMALLPOX—UNITED STATES

Michigan Dec 7 to 14, Detroit, Park Township and Rochester, smallpox reported
New Orleans, Dec 7 to 14, 11 cases, 2 deaths
Tennessee Shelby County, Nov 15 to Dec 15, 15 cases, Memphis, Nov 29 to Dec 13, 13 cases, Ashport, Dec 2, 1 case, Alamo, Dec 2, 2 cases

SMALLPOX—FOREIGN

Rio de Janeiro, Nov 9 to 16, 58 deaths, Nov 16 to 23, 49 deaths
Havana, Dec 5 to 12, 1 death
London, Dec 1 to 7, 1 death
Dublin, Dec 1 to 7, 5 cases, 1 death
Corunna, Oct 1 to 31, 3 deaths, Nov 1 to 30, 5 deaths
Constantinople, Aug 1 to 31, 14 deaths
Madrid, Nov 10 to Dec, 3, 12 deaths
Odessa, Nov 23 to 30, 3 cases, 2 deaths
Pernambuco, Nov 2 to 16, 108 cases, 28 deaths
Prague, Nov 23 to 30, 19 cases
Rotterdam, Dec 1 to 7, 1 death

CHOLERA—FOREIGN

India Bombay, Nov 12 to 19, 9 deaths, Calcutta, Nov 2 to 9, 47 deaths
Japan, to Nov 14, 56,367 cases, 39,721 deaths

YELLOW FEVER—FOREIGN

Rio de Janeiro, Nov 9 to 16, 7 deaths, Nov 16 to 23 18 deaths
Havana, Dec 5 to 12, 6 deaths
Pernambuco, Nov 2 to 16, 12 cases, 4 deaths
Santiago de Cuba, Dec 1 to 7, 20 deaths

MISCELLANY

It was the College of Pharmacy —We printed last week a press dispatch in regard to a conference with the Board of Trustees of the University of Illinois, with five members of the Chicago College of Physicians and Surgeons The item was in error The conference was held by representatives of the Chicago College of Pharmacy

The Mary Thompson Hospital of Chicago for Women and Children —Dr Marie J Mergler, Professor of Gynecology and Clinical Gynecology, Northwestern University Woman's Medical School, has been appointed Gynecologist and Head Physician and Surgeon to fill the vacancy caused by the lamented death of Dr Mary Harris Thompson In memory of the valued services of the deceased physician the name of the hospital has been changed from "The Chicago Hospital for Women and Children" to the above The hospital extends the privilege of bringing patients from all parts of the country and retaining the care of them, to physicians in good standing other than those of the medical staff Dr. Mergler holds the position of gynecologist to the Wesley Hospital and the Post-Graduate School and is also surgeon to the Woman's Hospital of Chicago

New Provision for Care of Oklahoma Insane —Section 2,990, paragraph 1, chapter 42, of the Oklahoma Statutes authorizing the Governor of the Territory to contract with any Territory or State in the United States, or with the proper authorities thereof, for the care of persons who become insane within the Territory, and who are citizens thereof, such care to be had in the insane asylums of the Territory or State with which such contract may be made, has been amended so that it is now, in substance, as follows The Governor is authorized and directed to enter into a contract with responsible individuals or private corporations for the treatment, care and maintenance within the Teritorry, of of the Territory's insane, and of all persons who become insane within the Territory, and who are citizens thereof, for a term not to exceed three years from on or before June 15, 1895, and at a rate not to exceed $300 per annum for each patient, *Provided*, That the contract shall stipulate that the regulations prescribed by law of the States of Illinois or Kansas for the treatment of the insane, shall be those governing the contractors in the care and treatment of the insane, as far as the same can be made applicable, *Provided, also*, That burial expense and accounts for conveying discharged patients to their residence shall be a county charge The Governor, it is also enacted in this connection, shall also have power under this act to contract for the deaf and dumb of the Territory, by parties within or without the Territory, in like manner as provided in this act for the care of the insane

Tablets of Quinin Not Approved —The conservative editor of the *Practitioner* offers a very original, not to say unpopular, notion that quinin be taken in effervescent solution The writer seems to have had a better experience with pills than with tablets He says, "It will frequently be found that if prescribed in a liquid effervescent form, quinin will agree well with the stomach As a prophylactic remedy, basic hydrochlorate of quinin is less irritating than the sulphate and more pleasant to take on account of the absence of the extremely bitter taste characteristic of the latter The dose can be carefully regulated, and it contains a proportionately larger quantity of quinin than the sulphate It is easily transported, and keeps perfect Hydrobromate of quinin, it seems, ought to be employed particularly for the treatment of obstinate fevers, in which the hydrochlorate has failed to produce the desired effect Quinin salts should not be put up in the form of tablets, as repeated examinations of samples from various sources have proved that they are either too brittle or completely insoluble After having administered such tablets to rabbits, the investigators found them two hours later to be entirely unaffected by the gastric juice Better results were obtained with gelatin capsules and medicinal pearls, which readily dissolved in slightly acid solutions or in the stomach of the rabbit The advantage of these preparations is the ease of controlling their composition and their small size Pills, contrarily to the prevailing opinion, gave the most prompt and invariable results, even when silver-coated pills, which had been kept upward of a year, were used Pills of pearls, containing 15 centigrams of quinin hydrochlorate, may be administered for prophylactic purposes—two daily, in a little water"

No Public Money for Private Hospitals —A hospital founded by a private benefactor is, in point of law, a private corporation, although dedicated by its charter to general charity When the corporation is said at the bar to be public, it is not merely meant that the whole community may be the proper subjects of the bounty, but that the government have the sole right, as trustees of the public interests, to regulate, control and direct the corporation, its funds and its franchises, at their own good will and pleasure These statements of the Supreme Court of Illinois in the case of the Washingtonian Home of Chicago v City of Chicago, decided October 11, 1895, furnish the key to its holding that the Washingtonian Home, which was incorporated as an institution for the care, cure and reclamation of inebriates, with power to elect its own directors and adopt such by laws as it thinks proper, but subject to no State, county or city control, is nothing more than a private corporation The act under which this institution was incorporated provided that it should receive ten per cent of all money paid for all licenses granted by the county or city for the right or privilege to sell spirituous vinous or fermented liquors in the county or city, and it was to compel the city of Chicago to pay it $25 000 thereunder that this suit was brought But conceding that this was a constitutional provision in 1867, the Supreme Court holds that it was rendered void by a clause in the State constitution of 1870 declaring that no county, city, town, etc , shall ever become subscriber to the capital stock of any railroad or private corporation or make donation to or loan its credit to any such corporation The fact that the city has for over twenty years made the payments after the adoption of the constitution, the court further holds, does not estop it from claiming the unconstitutionality of the act under which they are demanded

Contracts Not to Practice Medicine —It has come to be settled law that the mere sale of the goods, stock in trade and good will attached, without any express stipulation not to resume or engage in the business in that locality on the part of the seller, are not sufficient to warrant a court of equity in restraining the seller from again engaging in such business in the same locality And in such case it is to be noted that the sale necessarily puts an end to the business of the seller, at least for the time being But a sale by a physician of his residence, for example, need cause no interruption of his business, and therefore it would seem to be the conclusion of the Supreme Court of Indiana that in the latter case by so much the more will there be no interference to protect the purchaser aside from what he may be entitled to under an express contract In the case of Beatty v Coble, which that court decided Oct 18, 1895 a practicing physician contracted, in consideration of the purchase of his property, to " retire from the practice of medicine and surgery" at the place named The court holds that this contract must be construed or interpreted from the language employed therein, and from the circumstances surrounding the contracting parties, and thus get at their intention as expressed in the instrument In this way its plain meaning and import is found to be that the selling party agreed not to engage in the practice in that field, without limitation as to time His contention that a good faith retirement for a year and a half was a sufficient compliance, the court does not agree with It holds that the want of definite limit is no objection to the contract And it is a contract which will be enforced by injunction The adequacy of the consideration will not be inquired into Nor is a want of consideration shown in the fact that, at the time of making the contract, the physician was not owner of the property sold but it was the sole and separate property of his wife which was built for and used as a residence, and not as a physician's office, and no part of the consideration for the conveyance thereof was ever received by him, and no consideration ever passed between the purchaser of the property and him for the execution of the agreement sued on That, pending the appeal to the Supreme Court, he located in another town, the court also holds is no ground for dismissing the case, his practice reaching into portions of the county which constituted his former field of labor

Declarations to Physician —The declarations of a patient to his physician respecting his condition and symptoms at the time of seeking medical aid are admissible as evidence in his behalf, under a well settled exception to the rule excluding "hearsay" The exception originally rested on the ground, first, that as the common law forbade parties testifying, the facts involved could not not be proved in any other way, and second, that the patient's interest in the physician's opinion precluded danger of falsehood The modern practice of admitting parties as witnesses has removed the first of these grounds, but this is not considered a sufficient reason for excluding the testimony To render it admissible, however, the plaintiff must establish the fact on which the exception rests—that is that the declarations were made when seeking medical aid So says the United States Circuit Court of Appeals in the case of Del , L & W Ry Co v Roalefs, decided Oct 28, 1895 This was an action brought to recover compensation for personal injuries sustained in a railroad accident The only contest was over the amount due The plaintiff called as a witness a physician of great reputation as a medical expert, who had examined him professionally a year after the accident, when his condition was much improved, and asked him to state the former's declarations at the time respecting his condition and symptoms past and present, together with his own opinion based on these declarations and the personal observations made This testimony the court holds should have been excluded because the inference was irresistible that the plaintiff did not call to consult the doctor with a view to medical aid, but to employ and qualify him as an expert to assist in maintaining the pending suit Still the court holds that the doctor's opinion might have been taken hypothetically—based on his observations and the facts embraced in the plaintiff's statements Whether the admissions of such opinion should follow or precede proof of the supposed facts would have been a matter of discretion , but until the facts were proved the opinion could not be considered, and if its admission preceded the proof it should have been ruled out if the proof did not follow The opinion being inadmissible, nothing indicating how much it rested on the declarations and how much on personal observation, it must be accepted or rejected as a whole

Practical Notes

The Aluminum Corset —Dr Phelps, of New York City, recently addressed the Academy of Medicine on the merits of the various materials used in spinal disease In lateral curvature, the jacket of aluminum was, so far as he had tested it, freer from objections than the others, but it was somewhat expensive, costing fifty dollars or more A plaster corset was first made, the patient being suspended , this filled with plaster, and over the latter the aluminum cc was hammered into shape It had numerous perforatio smaller than a dime The weight of the apparatus is a two pounds If the patient changed much in shape and it would be necessary to make a new corset

Bacteriologic Examination of Nine Cases of Diphtheria Treated with Antitoxin —Stokes (*Boston Medical and Surgical Journal* cxxxii, No 24) describes briefly the results of the bacteriologic examination of nine fatal uncomplicated cases of diphtheria treated with the antitoxin The examination consisted in making slants upon blood serum from the lung, liver, spleen, kidney and the heart s blood In five cases the streptococcus was found in the liver, spleen, kidney and heart s blood, in one case in kidney and heart s blood, in one case in the spleen The pneumococcus was found twice in the kidney and in one of these the streptococcus was present in the spleen In one case the only organism present was the bacillus coli communis In the lungs of all these cases were found the bacillus diphtheriæ, streptococci, pneumococci, and staphylococcus pyogenes aureus, either alone or in various combinations The bacillus diphtheriæ was found in the kidney in four cases, once in the heart and once in the spleen The presence of these various organisms in addition to the bacillus of diphtheria enables one to understand the fatal issue in spite of the antitoxin administered, because this agent can not be assured to act against any other microorganism than the bacillus of diphtheria Assuming, the efficacy of this remedy to be greater, the earlier it is administered, it can not be too greatly emphasized that its thorough, early introduction may lessen the dangers of a secondary infection because it places the system in a better condition to overcome the various ill effects of various complicating bacteria that may be present in the body

Condyloma of the Trachea —Dr Harrison Griffin, of New York City, has reported in the *Medical Journal*, of that city, an instructive case of condylomata of the trachea The patient, a female aged 40 years, sought medical relief on account of a dryness and irritation in her throat, with a tickling cough, occasional great difficulty of breathing, which increased at times without any assignable cause, patient's voice was weak and hoarse, the breath fetid, and the respiratory movements labored during both sleeping and waking hours The slightest cold would develop a paroxysm of dyspnea There was a history of pudendal chancre about eight years ago An examination of her mouth, nose, and postnasal space was negative, an examination of her larynx showed the mucous membrane to be free from any congestion or ulceration

A view of the trachea during the act of inspiration showed a large projecting and granular growth, red in color and covered with a pultaceous secretion, the growth was irregular on its surface and separated by fissures, their edges being abrupt and sharp

The projecting mass was attached more to the anterior portion of the trachea and extended around two-thirds It seemed to be situated only a short distance below the vocal cord and extended down on the trachea to the distance of about an inch The lumen of the trachea was very much diminished The examination by the laryngoscope was made with great difficulty owing to the patient being very nervous The condition of the larynx and her unusual shortness of breath pointed to an immediate tracheotomy, but this was deferred as a last expedient The patient was given large doses of potassium iodid (1 drachm four times a day), and unguentum hydragyri oxidi rubri was ordered to be rubbed in over the thyroid cartilage The case was seen daily for three weeks when she was discharged with the parts completely healed, but warned her to continue medicine for a certain space of time

An examination with the laryngoscope at this period showed but slight narrowing of the trachea at the point of the syphilitic affection Her breathing was normal and the swelling of the neck subsided as she came under the influence of the iodid She was now able to lie prone in bed and and all attacks of dyspnea subsided

The rarity of these cases is indicated by the statement of Sir Morrell MacKenzie, that he had met with three cases only among 1,145 cases of syphilis of the region of the larynx and pharynx

Detroit Notes

Paper on Croupous Pneumonia —The Detroit Medical and Library Association at its regular meeting, December 16, listened to an instructive paper by Dr D S Campbell on "Croupous Pneumonia" The Doctor said, "My paper is on the present management and treatment of croupous pneumonia, based on the fact that it is a specific or constitutional disease, similar to that of typhoid fever, etc, that it will run a natural course and can not be abated by any mechanical or therapeutic measure, also that the ever constant symptom of greatest importance is the excessive temperature which is independent of the local manifestations in the lung About 80 per cent of croupous pneumonia cases do not require anything but good nursing and care but that the remaining 20 per cent—those who are attacked with it very seriously and from the out-set with perhaps several rigors, denoting its approaching malignant type and impending excessive fever—require active measures toward holding this latter symptom in abeyance, which if continued for a day or two, would tend to produce cardiac insufficiency, the other organ which is most dependent on its effection. The treatment for this is laid down from actual experience, and was best *carried out* by the use of cold applications, or the bath commencing at 90 degrees, gradually reduced to about 65 the patient to remain in it from thirty to forty minutes as the case demanded, and if any reaction resulted they were given freely whisky or brandy in modern doses, but from my experience the excessive fever should be reduced from one-half to two and one half degrees If pain was present in the onset I employed hypodermic injections of morphia with atropia in their usual doses, and chloral hydrate if the patient required it from want of sleep or restlessness"

Dr Christian F Kapp's suit against George Hermindinger as noted in the last number of the Journal, in which the Doctor sought to recover $15,000, for making 372 calls and furnishing the medicine upon smallpox cases, Mr and Mrs Hermindinger with *their children* being the patients, resulted in a verdict for the Doctor for $400 One practicing physician in testifying said $2 was enough for visiting a smallpox patient This suit was tried by a Washtenaw County jury in Ann Arbor Health office report for week ending Dec 21, 1895 Deaths *under 5 years*, 22, *total* 85, births, male 41, female 49, *total* 90 Contagious diseases Diphtheria Last report 40, new cases 36, recovered 36, died 7, now sick 33 Scarlet fever Last report 25, new cases 3, recovered 6, died 1, now sick 21 Smallpox Last report 3, new cases none, recovered none, died *none, now sick* 3

St Louis Notes.

Reports of the Health Office —For the week ending December 14, the total number of deaths from all causes was 170 as compared with 159 for the preceding week, and 154 for the corresponding period of 1894 Births reported, 204 Report for the week ending December 21 Total number of deaths from all causes, 167, in corresponding period of 1894, 145 Contagious diseases reported during the week ending December 14 Diphtheria, 111 cases, 9 deaths, croup, 14 cases, 8 deaths, whooping cough, 4 cases, one death, measles, 9 cases, typhoid fever, 6 cases, scarlatina, 7 cases During the week ending Decemper 21, Diphtheria, 87 cases, 10 deaths, croup, 14 cases, 5 deaths, typhoid fever, 14 cases, 1 death, whooping cough, 1 case, scarlatina, 16 cases

St Louis Medical Society —The meeting December 14 was the occasion of a change of program and an extension of courtesy to Dr B Sachs, of New York, who read a paper on "Syphilis of the Spinal Cord" The meeting on December 21 was notable as the occasion of the presentation to the society, by Dr Warren B Outten, of a portrait in oil of the late Dr Charles A Pope The portrait is the product of Dr Outten's artistic talent and was presented by him in a very happy speech One of the Nestors of the society, Dr William M McPheeters, responded on behalf of the society in a speech of acceptance Dr Pope was well known as the first Dean of the St Louis Medical College, and his life and work exercised a marked influence upon the medical thought and practice of St Louis, and more widely through numerous students

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Reminiscences of his life were related during the evening by Dr Pollak and others of his immediate contemporaries

The Clinico-Pathological Society —This society was organized in November with an initial membership of twenty The executive board is constituted by Drs James A Close, Hugo Summa, H J Cummings, A J Bock, and C G Chaddock, Secretary The meetings are held on the second and fourth Mondays of each month At the meeting December Dr B M Hypes read an important paper on "The Use of Intra Uterine Injections of Glycerin for the Induction of Labor" The paper and discussions overwhelmingly condemned the use of glycerin for such a purpose because of the unavoidable dangers attending it The paper was based on a fatality following the injection of glycerin, and written anent favorable reports of its utility that have recently appeared in literature The remainder of the evening was devoted to the discussion of pathologic specimens and cases, in particular the case of a death in chloroform narcosis presented by Dr Summa, where the kidneys were found to be in an advanced stage of cirrhosis The question raised for discussion was what should be the criterion of contra indication for the use of chloroform in such cases It was pointed out that not the simpler urinary indications should be the guide, but rather the indications to be gained from an exact quantitative estimate of the excretion of urea The program announced for the meeting December 23, includes a paper on "The General Medical Relations of Uranalysis" by Dr Hugo Summa and "A Case of Cerebral Tumor, with Specimen," to be discussed in its diagnostic and surgical relations, by Dr C G Chaddock The program for the first meeting in January includes a paper by Dr J A Close entitled "What Amount of Work in Bacteriology should the General Practitioner be able to Perform?"

Louisville Notes

Petition —The women of the State are circulating a petition among themselves which they will present Governor Bradley requesting that he appoint only married men as resident physicians at the various insane asylums in the State It is an assured fact that the governor will not countenance any such reflection on the prominent physicians of the State whose names have been mentioned in connection with the appointments

Irregular Practitioners —Dr J N McCormack, Secretary of the State Board of Health, has issued a circular letter, under date of Dec 16, to all county medical referees, calling their attention to the fact that a number of so-called doctors" from the advertising "medical companies" of Indianapolis, Cincinnati and Chicago, are plying their trade in the outlying districts of the State They accept fees, in negotiable notes, payable at some point outside of the State These are promptly discounted, and in this way thousands of dollars have been extorted from families who can the least afford such a loss One conviction has been obtained in Grant County and warrants are out for others The referees are admonished to be on the lookout for them and to report to Dr McCormack

Academy of Medicine —At the regular meeting of the Academy on Monday evening Dec 16, Dr I N Bloom read the paper, on "An Historic Sketch of the Etiology of Chanroids" The Academy voted to give up their present quarters in the Fonda Block, and will move to the Louisville College of Pharmacy building, corner First and Chestnut streets, where they will be at very much less expense

Deaf Mutes —Superintendent J E Ray of the Kentucky Institution for the Education of Deaf Mutes, located in Danville Ky, has just made his report to the governor, extending over a period of two years It shows that for the year ending Oct 31, 1894, the expenditures for all purposes amounted to $41,709 55, or a per capita expense of only $164 For the year ending Oct 31, 1895 with 835 pupils enrolled against an enrollment of 225 the previous year, the expenditures aggregated $49,267.29, or a per capita expense of less than $147 This is a most successful work

Surgeon General —Dr J F Kimbly, of Owensboro, has been appointed Surgeon General of the State Guard with rank of colonel Dr Kimbly is a prominent republican and made the race for Congress in 1892, being defeated by W T Ellis

Rubey —William Rubey, who has been illegally practicing medicine in this city, was arrested at the instance of the State Board of Health, tried in the City Court and fined $100, having been previously convicted and fined in the Boyle County Court for the same offense The testimony of the two witnesses showed that Rubey claimed to cure by the laying on of hands" and administering a "kidney tonic," receiving in the case of one witness compensation therefor

Health Ordinances —The upper Board of the Common Council has passed the health ordinances drawn up and presented by the health officer, Dr White, and await now the signature of the Mayor These are very comprehensive laws and provide for the notification of the health office of contagious diseases and the proper placarding of houses in which the cases are, the control of funerals of those dead from contagious diseases, the care of smallpox cases, the vaccination of school children and all persons exposed to smallpox, and the abatement of sanitary nuisances There has been a general cut of all city officials salaries, and Dr White's has been reduced to $1 800 from $2,000, and his clerk has been removed This is greatly to be regretted, as the added work on account of the recently passed ordinances makes a clerk indispensable to the proper conduct of the health department

License —It is greatly to be regretted that the excellent work of the new Common Council recently elected in reducing the city expenses should be marred in its efforts to obtain revenue, by adding an additional sum to the license required of practicing physicians. The license required at present is $10 per year, and it was recently raised to $15

Deaths —The weekly death report shows a total of sixty one deaths, forty five white, sixteen colored Pneumonia caused four deaths, consumption six, typhoid fever four and diphtheria three

Washington Notes

Weekly Report of the Health Officer —The report of the Health Officer for the week ending Nov 30 is as follows Number of deaths (still-births not included) White, 66, colored, 44, total, 100 Death rate per 1,000 per annum White, 18 8, colored, 23 8, total, 23 8 Death rate per 1,000 per annum corresponding week last year, 14.2 The deaths reported at the Health Department during the past week numbered 110 The mortality for the week previous was 86 The increase is mainly due to brain, lung and kidney diseases, the deaths from the latter malady numbering 10, and those from lung troubles reaching 27 Nearly one-fourth of all the persons who died were under 5 years of age Forty of the decedents were over fifty years old There were 6 deaths imputed to typhoid fever, 3 were from diphtheria and 1 from scarlet fever The deaths from violence numbered 5, of which 2 were suicides Hospitals reported 21 and the coroner 10 deaths Marriages reported were 41, and births returned were 107 and still births 14

Officers of the Foundlings' Hospital —At a meeting of the Board of Directors of the Washington Hospital for Foundlings held December 16, the following were chosen as officers of the Board of Lady Visitors Mrs W P Kellogg, President, Mrs S W Cullom, Mrs M C Stone, Mrs Charles G Dulin, Mrs F E Warren and Mrs J N Whitney, Vice-Presidents, and Mrs C B Beall Secretary

Dental Society Elects Officers —At the twenty-ninth annual banquet of the Washington City Dental Society, held December 19, Dr A W Sweeney read the annual address and Dr L C F Hugo officialed as toastmaster Officers for the ensuing year were elected as follows Dr William M Hunt, President, Dr D E Wilbur, Vice-President Dr W N Cogan, Secretary, Dr M F Finley, Treasurer, Dr N H B Noble, Librarian, and Dr Garnett L Hills, Essayist

Hospital Directors Appointed —The Commissioners have appointed as Directors of the Columbia Hospital and Lying-in Asylum, to fill two vacancies, Surgeon General George M Sternberg, U S A, and John B Wright, Secretary of the Board of Trade Formerly the Directors filled all vacancies occurring in the Board, but Congress recently amended the charter of the hospital requiring the Commissioners of the District to fill all vacancies

Physician to the Poor Appointed —Dr A T Mitchell has been appointed physician to the poor, vice Dr J C Meredith, whose term has expired The Commissioners have accepted the resignation of Dr V B Jackson, resident physician at the Washington Asylum Hospital, and appointed Dr T B McDonald to fill the vacancy Dr McDonald was first assistant resident physician to the Emergency Hospital and resigned to accept the late appointment

Central Dispensary and Emergency Hospital —The competitive examinations held December 20 at the hospital, resulted in the selection of the following named physicians Dr B F McGrath, President, Dr Max Peralto, First Assistant, and Dr William E West, Second Assistant They enter upon their respective duties on January 1

Physicians Shall not Disclose Confidential Communications—Mr Morrill has introduced a bill in the Senate providing that in the courts of the District of Columbia no surgeon shall be permitted, without the consent of the person afflicted, to disclose any information which he shall have acquired in attending a patient in a professional capacity, and which was necessary to enable him to act in that capacity, whether such information shall have been obtained from the patient or his family, or from the person or persons in charge of him, provided that this act shall not apply to evidence in criminal cases where the accused is charged with causing the death, or inflicting injuries upon a human being, and the disclosure shall be required in the interest of public justice

Recommendation of the District Grand Jury —The Grand Jury has rendered a report on the prevalence of typhoid fever in the District "Although the conclusions set forth were reached two months ago, pressure of other business justified delay until now," says the report "It is useless to obscure facts Each successive year in the past twelve has practically added to the per capita number of typhoid cases in this District Statistics which are facts show the proportion greater than the situation and climatic conditions seem to warrant Our belief, based on scientific examination, is that Potomac water for drinking purposes at the present time is conducive to the germination of typhoid fever"

A system of sedimentation and filtration is primarily necessary, the grand jury thinks, also that the water supply should be increased, that as opportunity offers all pumps and wells should be closed, and that box privies be discontinued by law

"All improved premises abutting on public sewers and water mains" continues this report, "should be connected with such sewers and water mains, and their occupancy unless so connected prohibited by law"

Dr Busey's Presidential Address —At the meeting of the Society held on December 18, Dr Samuel C Busey read his presidential address for 1895, entitled "Compulsory Reports of Zymotic Diseases, Milk Legislation, Medical Practice Laws and Society Publication of Its Transactions" Seldom, if ever before, has this Society listened to so scientific and practical an array of facts and suggestions The Society tendered him a vote of thanks and ordered one thousand copies of the address printed for distribution The annual meeting for the election of officers will take place January 6, 1896, and the general sentiment is for his re-election

Washington Obstetrical and Gynecological Society —he 237th meeting of the Society was held December 20 Dr S S Adams reported a case of typhoid fever in a child 3 years of age, Dr Deale reported a case in which there was a large quantity of H_2S in the urine

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S Army, from December 14 1895 to December 20 1895

Capt Guy L Edie, Asst Surgeon, is granted leave of absence for four months

Marine Hospital Changes Official list of changes of station and duties of Medical Officers of the U S Marine Hospital Service for the fifteen days ended December 15 1895

Surgeon G W Stoner, granted leave of absence for thirty days, Dec 6, 1895

P A Surgeon A H Glennan, granted leave of absence for ten days, Dec 5, 1895

P A Surgeon W J Pettus, to assume temporary command of Service at Norfolk Va, in addition to present duties, during absence of Surgeon H R Carter, Dec 13, 1895

P A Surgeon J J Kinyoun, granted leave of absence for twenty three days Dec 12, 1895

P A Surgeon J O Cobb, granted leave of absence for two days, Dec 5, 1895

Asst Surgeon Rupert Blue, granted leave of absence for eighteen days Dec 3, 1895 Detailed to make physical examination of immigrants at San Francisco Cal, Dec 13, 1895

Marine-Hospital Service Examinations

There will be held at Washington D C, on Feb 10, 1896, a competitive examination of candidates for appointment to the position of Assistant Surgeon in the United States Marine Hospital Service Candidates are required to be not less than 21 years of age, and no appointment is made of any candidate over 30 years of age They must be graduates of a reputable medical college and furnish testimonials as to character

Successful candidates, having made the required grade are appointed in order of merit as vacancies arise during the succeeding year There is at present one vacancy

A successful candidate when recommended for appointment is commissioned by the President of the United States as an Assistant Surgeon After four years of service and a second examination he is entitled to promotion to the grade of Passed Assistant Surgeon and to the rank of Surgeon, according to priority, on the occurrence of vacancies in that grade

The salary of an Assistant Surgeon is $1,600 per annum together with furnished quarters light and fuel that of a Passed Assistant Surgeon $1,800 and that of Surgeon $2,500 per annum In addition to the above salaries after five years' service, an additional compensation of 10 per cent of the annual salary for each five years of service is allowed medical officers above the rank of Assistant Surgeon the maximum rate, however, not to exceed 40 per cent When an officer is on duty at a station where there are no quarters furnished by the government compensation for quarters is allowed at the rate of $30 per month for an Assistant Surgeon $10 for a Passed Assistant Surgeon and $50 for a Surgeon The successful candidates after receiving appointments, are usually ordered to one of the larger stations for training in their duties Full information may be obtained by addressing the Surgeon General of the Marine Hospital Service, Washington D C

Change of Address

Bellamy, B C, from Covelo to 1327 S San Joaquin Street, Stockton, Cal

Carnes U Maurice, from Canton to 276 Euclid Avenue, Cleveland, Ohio

Isbester R T, from 582 Madison Street to 636 Washington Boulevard, Chicago, Ill

Nance W O from Berlin Germany, to care Brown Shipley Co, Founders Court E C London Eng

Pring Ernest from 1631 Devisadero Street, to 3003 Fillmore Street, San Francisco, Cal

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